Alrajhi

PASTEST 2025

Dermatology

Pastes+

Arranged by :

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لاتنسونا من خالص دعائكم

A 19-year-old man presents to his General Practitioner (GP) with multiple episodes of unexplained abdominal pain. He also has documented positive faecal occult bloods.

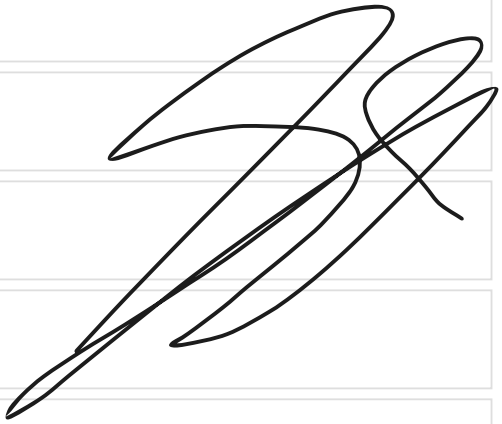
On examination, there is peri-oral pigmentation with a number of macular lesions which cross the vermillion border. His blood pressure (BP) is normal at 110/70 mmHg, while his pulse is 68 beats per minute (bpm) and his body mass index (BMI) is 23 kg/m^2. His abdomen is soft but mildly tender on palpation.

He is admitted to the Emergency Department (ED) acutely a few days later after an upper gastrointestinal (GI) haemorrhage. An upper GI endoscopy reveals a number of hamartomatous polyps.

Which of the following diagnoses fits best with this clinical picture?

Your answer was incorrect

A	Plummer–Vinson syndrome
B	Peutz–Jegher's syndrome
C	Gardener's syndrome
D	Familial adenomatous polyposis
E	Cowden disease



Explanation

B	Peutz–Jegher's syndrome

This is an autosomal dominant disorder characterised by the presence of multiple hamartomatous polyps throughout the gastrointestinal tract, and mucocutaneous melanocytic macules. The condition has equal sex distribution and has been documented in most races. The cause is thought to be a mutation of the serine threonine kinase 11 gene. There is significant risk of eventual malignant transformation. Almost half of all Peutz-Jegher's syndrome patients develop and die from cancer by the age of 57 years. The mean age at first diagnosis of cancer is 43 years. The cumulative risks of cancer development are highest for the stomach, colon, pancreas and breast. Regular surveillance examinations, endoscopies and ultrasound imaging (yearly) are recommended.

C	Gardener's syndrome

Gardener's syndrome leads to formation of multiple adenomas, and is associated with the development of colon cancer. It is also associated with multiple osteomas, skin and soft tissue tumours.

A	Plummer–Vinson syndrome

Plummer Vinson syndrome is characterized by difficulty in swallowing, iron deficiency anaemia, glossitis, angular cheilosis (also known as angular cheilitis) and oesophageal webs. It is a risk factor for development of squamous cell carcinoma.

D	Familial adenomatous polyposis

FAP is associated with colonic polyps and increased risk of colon cancer, without the peri-oral pigmentation seen here.

E	Cowden disease

Cowden's disease is associated with formation of multiple hamartomatous polyps, it causes oral mucosal papillomatosis and acral keratoses, rather than the picture seen here.

33054

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Difficulty: Easy

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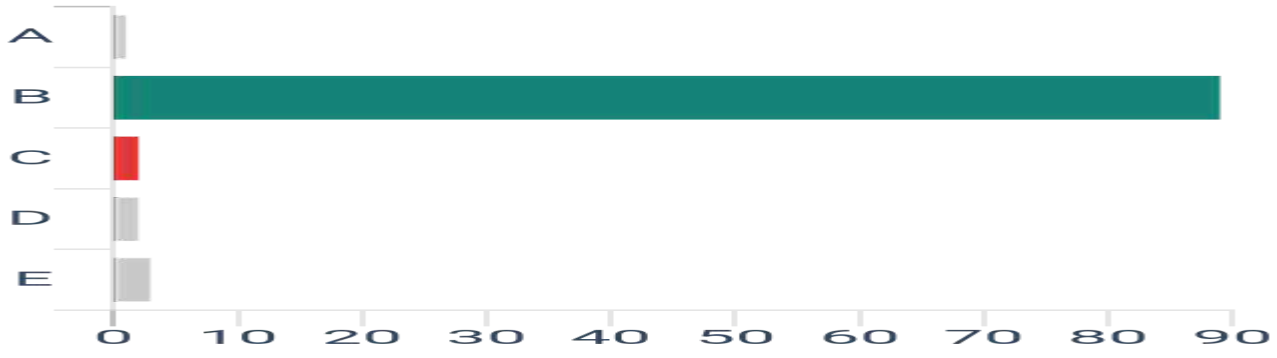

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Peutz-Jeghers Syndrome

Expanded explanations

A 73-year-old man who is confined to bed for most of the day because of a right-sided hemiplegic stroke, is admitted on the Emergency Department (ED) with a sacral pressure sore. His General Practitioner (GP) and Practice Nurse have been keeping it dressed, although it has continued to deteriorate and he is now pyrexial and confused.

On examination, he is pyrexial - his temperature is 38.5°C. His blood pressure (BP) is 105/70 mmHg, while his pulse is 92 beats per minute (bpm) and regular. There is a 5 cm sacral pressure sore with a necrotic edge. There is frank pus within the wound itself.

Investigations reveal the following;

Investigation	Result	Normal values
Haemoglobin (Hb)	109 g/l	135–175 g/l
White cell count (WCC)	15.2×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	201×10^9/l	$150–400 \times 10^9$/l
Sodium (Na^+)	137 mmol/l	135–145 mmol/l
Potassium (K^+)	4.5 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	132 µmol/l	50–120 µmol/l
C-reactive protein (CRP)	201 mg/l	< 10 mg/l
Glucose	8.4 mmol/l (fasting)	< 5.6 mmol/l

Which of the following is the most important intervention?

Your answer was incorrect

A	Hydrogel dressing
B	IV Co-amoxiclav
C	Larval therapy
D	Silver nitrate dressing
E	Surgical debridement

Explanation

E	Surgical debridement

The answer is Surgical debridement -

At this stage signs of significant systemic bacteraemia, (pyrexia, confusion, elevated white count and marked elevation in CRP), coupled with necrotic tissue around the pressure sore, debridement is the most appropriate next step. This could then be followed by IV antibiotics. Given the glucose indicates diabetes mellitus, a relatively broad-spectrum antibiotic such as Co-amoxiclav should be considered.

B	IV Co-amoxiclav

IV coamoxiclav, is incorrect, but is appropriate as an antibiotic choice, but should be considered in addition to surgical debridement.

A	Hydrogel dressing

Hydrogel dressing, is incorrect however it is appropriate with respect to removing slough / necrotic tissue from the wound, although given significant systemic features of bacteraemia, surgical debridement is the better choice here.

C	Larval therapy

Larval therapy, is incorrect, it is one method of removing necrotic tissue, although more rapid resolution of symptoms with surgical debridement is the better option.

D	Silver nitrate dressing

Silver nitrate dressing, is incorrect, silver based dressings are generally considered for wounds with minimal amounts of slough / necrotic tissue, such as burns, rather than the pressure sore seen here.

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Previous Question

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A 35-year-old woman comes to the Emergency Department (ED) for review. She is concerned about a suspicious mole on her leg and has recently returned from a six-month working holiday on a farm in Australia. On further questioning, it transpires that she has had extensive sun exposure and has had three moles removed over the past five years.

On examination, she is pale-skinned with ginger hair. The mole on her left calf is shown below:

Which of the following is the most appropriate intervention?

Your answer was correct

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Apr 6, 2025

A	Cryotherapy
B	Excision biopsy
C	Loop removal
D	Punch biopsy
E	Topical Fluorouracil

Explanation

B	Excision biopsy

This lesion has irregular pigmentation and borders. Taking into account her previous history, it may be a malignant melanoma. As such, excision biopsy to provide detailed histology is the most appropriate next step. The excision margins for the biopsy are dependent upon the stage of melanoma, according to the National Institute for Health and Care Excellence (NICE) guidelines.

A	Cryotherapy

Cryotherapy is only recommended for lesions that are suspected to be benign. Removal using cryotherapy makes histological interpretation impossible because of tissue destruction.

C	Loop removal

Loop removal is not recommended for the same reasons cryotherapy should not be used. Significant tissue destruction ensues, and it is difficult to ensure adequate resection margin when loop removal is used.

D	Punch biopsy

Punch biopsy may be taken from an area of the mole where less abnormal cells are identified and would not provide evidence of excision margins. It should not therefore be used here.

E	Topical Fluorouracil

This is used in the treatment of solar keratoses and is an inadequate intervention for malignant melanomas which metastasise early.

39511

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A 29-year-old woman presents to the Dermatology Clinic with itchy, pigmented macules on her trunk and limbs, which has developed over a period of five years. She says they become particularly itchy and red when they are rubbed and when she has a bath or exercises.

She denies any wheezing, flushing, diarrhoea, abdominal pain or any other systemic symptoms. She has no significant past medical history.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Vasculitis
B	Systemic mastocytosis
C	Urticaria pigmentosa
D	Carcinoid syndrome
E	Leukaemia cutis

Explanation

C	Urticaria pigmentosa

Urticaria pigmentosa (UP) or cutaneous mastocytosis is part of a group of conditions called ‘mastocytosis’, in which mast cells proliferate and accumulate in the skin and other organs. UP is a localised form of mastocytosis confined to the skin. It manifests in brown, freckle-like macules that urticate (become erythematous and raised) if rubbed.

E	Leukaemia cutis

Leukaemia cutis would normally present with more pronounced, raised lesions (papules/nodules or plaques) and one would expect symptoms and signs of bone marrow failure.

A	Vasculitis

Vasculitis is limited to the skin only, and without progression over the course of 5 years to involve other organs such as the kidneys would be very unusual.

B	Systemic mastocytosis

In systemic mastocytosis, mast cells disseminate widely in the skin and there may be systemic symptoms of mast cell release including wheezing, flushing, diarrhoea, hypotension, syncope, dyspnoea and anaphylaxis. Serum tryptase may be raised.

D	Carcinoid syndrome

Carcinoid syndrome may cause episodic facial flushing eventually leading to persistent facial erythema and telangiectasia.

38520

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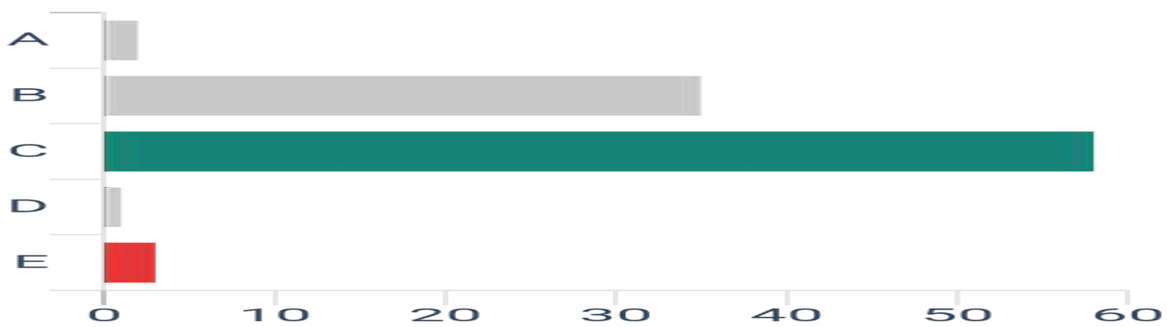

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A 23-year-old woman presents to the Emergency Department (ED) with a three day history of painful genital ulceration. The pain is worse on passing urine. She also complains of flu-like symptoms with myalgia and mild fever.

On examination, there are multiple small, white painful ulcers all over the genitals. She has tender lymphadenopathy in the inguinal region.

A swab is taken of the ulcers.

What is the most appropriate next step whilst the results are pending?

Your answer was incorrect

A	Give 7 days of treatment-dose aciclovir; no further investigations required
B	Take blood for herpes simplex-1 antibodies
C	Take blood for herpes simplex-2 antibodies
D	Take blood for herpes simplex-1 antibodies and give 7 days of treatment-dose acyclovir
E	Take blood for herpes simplex-2 antibodies and give 7 days of treatment-dose aciclovir

Explanation

A	Give 7 days of treatment-dose aciclovir; no further investigations required

This patient has a history and examination consistent with primary genital herpes infection; as such, she should be treated with aciclovir whilst results of swabs to confirm the diagnosis are pending. No blood tests are necessary for the diagnosis: PCR on the viral swabs is sufficient. Treatment is thought to be most effective if initiated in the first 72 hours as complication rates and disease length are both reduced.

D	Take blood for herpes simplex-1 antibodies and give 7 days of treatment-dose acyclovir

It is correct to treat this patient immediately with aciclovir as there is sufficient clinical evidence of genital herpes. However, the PCR from the viral ulcer swabs that have already been taken is sufficient to confirm the diagnosis. There is no need to undertake serological testing, and furthermore, genital herpes is caused by herpes simplex-2, not -1. Serological testing has a poor positive predictive value.

B	Take blood for herpes simplex-1 antibodies

This patient has a history and examination consistent with genital herpes, and should be treated for it whilst confirmation is awaited from PCR on the ulcer swabs. Furthermore, it is herpes simplex-2 that is the most common cause of genital ulceration: herpes simplex-1 typically causes oral ulceration (cold sores). Serology is unhelpful in the diagnosis of herpes virus infections. The correct action would be to give this patient 7 days of treatment-dose aciclovir, and there is no need for further investigation whilst the results of swabs are awaited.

C	Take blood for herpes simplex-2 antibodies

Serology is of very little value in herpes simplex-2 infections: it can take 12 weeks for it to become positive in primary infection, and has a low positive predictive value in low-prevalence populations. The correct course of action would be to give this patient 7 days of treatment-dose aciclovir and await the results of PCR from the viral swabs that have already been taken; there is no need for any further tests.

E	Take blood for herpes simplex-2 antibodies and give 7 days of treatment-dose aciclovir

It is appropriate to give this patient treatment with aciclovir whilst awaiting the results of the swabs, because she has clear clinical features of genital herpes. However, there is no need for serological testing for herpes simplex-2: this has a poor positive predictive value and serology may not be positive until 12 weeks after primary infection. No further investigations are needed in this case: the PCR results from the ulcer swabs are sufficient to confirm the diagnosis and the only action required is to give treatment-dose aciclovir.

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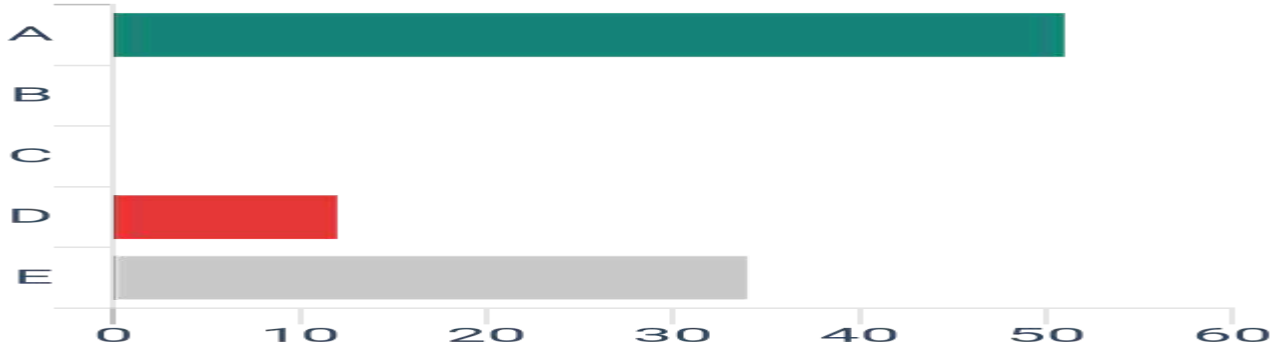

An 18-year-old man is reviewed in the Immunology Clinic with a history of recurrent chest infections since infancy. He has recently been seen in the same-day Emergency Care Clinic for left lower limb cellulitis requiring intravenous antibiotics. During the consultation, he also reports visual disturbance, including sensitivity to bright light with occasional blurred vision. He has no known past medical history and recently immigrated to the UK from Eastern Europe.

On examination, his observations are within normal limits. There are fine crackles at the lung bases, and his heart sounds are normal. It is noted that his eyes are a pale blue–grey colour, with visible nystagmus on lateral gaze. Trying to assess the pupillary response to light causes significant discomfort to the patient.

Investigations:

Investigation	Result	Normal value
Haemoglobin (Hb)	135 g/l	115–155 g/l
White cell count (WCC)	2.7×10^9/l	$4.0–11.0 \times 10^9$/l
Neutrophils	0.4×10^9/l	$1.8–7.5 \times 10^9$/l
Platelets	90×10^9/l	$150–450 \times 10^9$/l
Blood film	Lysosomal granules within monocytes, granulocytes and leucocytes	

What dermatological condition is most associated with the likely diagnosis?

Your answer was incorrect

A	Albinism
B	Erythema nodosum
C	Lichen planus
D	Pityriasis alba
E	Vitiligo

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Apr 6, 2025

Explanation

A	Albinism

This patient has a diagnosis of Chédiak–Higashi syndrome. It is a rare autosomal-recessive disease that, due to genetic mutations in the lysosomal trafficking gene, causes recurrent bacterial infections, thrombocytopenia and neurological symptoms including nystagmus, photophobia and peripheral neuropathy. Intellectual disability may also be seen. Characteristic blood film findings include inclusion bodies and lysosomal granules within monocytes, granulocytes and leukocytes, and neutropenia and thrombocytopenia are common. Chédiak–Higashi syndrome is a cause of albinism, a dermatological condition characterised by absent melanin production that leads to general hypopigmentation of the skin, hair and eyes. Pale blue–grey eyes, white or yellow hair and pale skin are all features of albinism, in addition to ocular signs of nystagmus, strabismus and photosensitivity.

B	Erythema nodosum

Erythema nodosum is a hypersensitivity reaction that causes tender and erythematous nodules to appear, most commonly over the shins. It is associated with arthralgia, fever and other underlying conditions, for example, inflammatory bowel disease or sarcoidosis. However, it is not associated with the above presentation.

C	Lichen planus

Lichen planus is an idiopathic inflammatory dermatological condition that causes an eruption of itchy and shiny papules over the extremities that often has a violaceous colour. These lesions are often itchy and can also affect the mucous membranes and genitalia. It is not seen in Chédiak–Higashi syndrome.

D	Pityriasis alba

Pityriasis alba is a hypopigmentation skin condition characterised by multiple small hypopigmented lesions over the face, neck, shoulders and upper arms. It is relatively asymptomatic and may resolve after puberty. It is not related to this patient's presentation.

E	Vitiligo

Vitiligo is a hypopigmentation skin condition associated with underlying autoimmune conditions such as hypothyroidism and pernicious anaemia. The extent of skin involvement in vitiligo ranges from focal skin involvement to complete pigment loss.

73501

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A 45-year-old woman presents to her General Practitioner (GP) with a rash in her lower legs, rigors, fever, and a sore throat. A throat swab reveals the presence of gram positive bacteria organised in chains.

Which of the following skin conditions is she most likely presenting with?

Your answer was incorrect

A	Erythema nodosum
B	Erythema annulare centrifugum
C	Erythema migrans

D	Erythema marginatum
E	Erythema induratum

Explanation

A	Erythema nodosum

Erythema nodosum is a type of panniculitis (inflammation of the adipose tissue) resulting in red, tender nodules, which commonly occur on the lower legs but may also occur anywhere. It is associated with throat infections due to streptococcus or viral infections (as in this case), sarcoidosis, inflammatory bowel disease, tuberculosis and leprosy.

D	Erythema marginatum

Erythema marginatum consists of spreading erythematous rings that are associated with acute rheumatic fever (fever, carditis, migratory polyarthritis,) secondary to infection by group A beta-haemolytic streptococci.

B	Erythema annulare centrifugum

Erythema annulare centrifugum is a chronic, recurrent, annular erythema that may be idiopathic or linked to a number of infections, medications and underlying conditions (e.g. Graves disease).

C	Erythema migrans

Erythema chronicum migrans develops a few days following a tick bite and is a cutaneous pathognomonic sign of Lyme's disease. Expanding, erythematous lesions occur in a bull's-eye pattern and are associated with flu-like symptoms.

E	Erythema induratum

Erythema induratum of Bazin is a rare nodular vasculitis (tender erythematous, indurated nodules and plaques) commonly affecting the posterior calves and associated with mycobacterium tuberculosis infection.

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A 36-year-old male is refered to the Dermatology Clinic by his General Practitioner (GP) with the on his anterior shoulder shown below. He has a new partner who finds it unsightly and he wants it treated.

Which of the following best describes the abnormal area of pigmentation shown on his shoulder?

Your answer was incorrect

A	Benign epidermal naevus
B	Naevus flammeus
C	Mongolian blue spot
D	Café au lait spot
E	Haemangioma

Explanation

A	Benign epidermal naevus

Benign epidermal naevi, (formerly known as Becker's naevi), have a characteristic appearance with linear pigmentation, often located around the shoulder. They carry a brown pigment due to melanocytes and may also be hairy.

C	Mongolian blue spot

Mongolian blue spots are located over the sacrum, are blue in colour and identified at birth.

B	Naevus flammeus

This is a vascular naevus or port wine stain. When these occur on the head, patients are usually investigated for the presence of leptomeningeal angiomas.

D	Café au lait spot

These are flattened macular pigmented areas identified at birth and associated with neurofibromatosis Type 1.

E	Haemangioma

Haemangiomas are benign vascular tumours identified in childhood, they are known as strawberry naevi because of their colour.

39096

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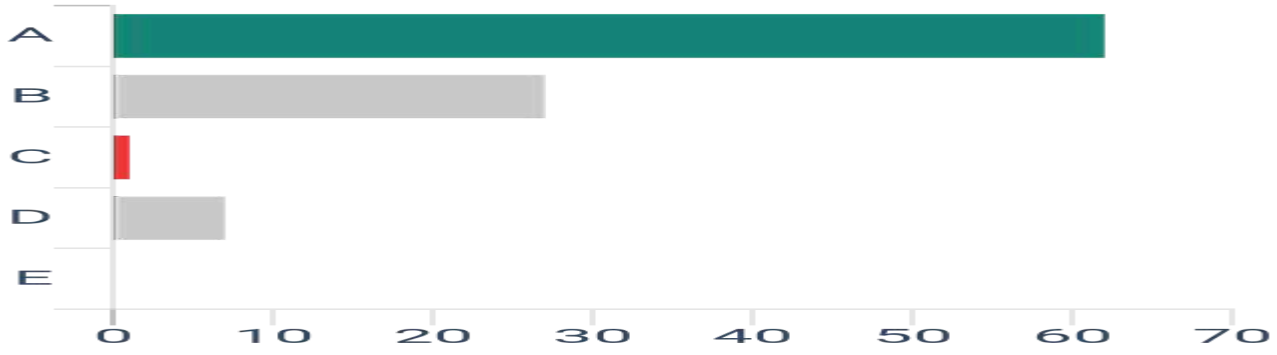

A 56-year-old woman presents to the Dermatology Clinic with a three month history of itching in the groin region. Her General Practitioner (GP) had prescribed topical steroids for presumed ‘eczema’. This has not been of any benefit.

The rash is shown below:

What is the most likely diagnosis?

Your answer was incorrect

A	Tinea incognito
B	*Pthirus pubis*
C	*Pediculus humanus humanus*
D	*Malassezia furfur*

E	*Candida albicans*

Explanation

A	Tinea incognito

Tinea is an infection with a dermatophyte fungus. Tinea incognito is the name given to tinea when the clinical appearance has been altered by inappropriate treatment, usually a steroid cream. Compared with untreated tinea corporis, tinea incognito has a less raised margin, is less scaly and more pustular. Treatment with a topical anti-fungal and loose-fitting cotton underwear is likely to resolve the problem.

D	*Malassezia furfur*

This is the yeast infection thought to be responsible for seborrheic dermatitis and pityriasis versicolor, presenting with a rash on the face or the trunk most commonly.

B	*Pthirus pubis*

Pubic crabs produce itching and the bites result in wheals and erythematous or bluish macules.

C	*Pediculus humanus humanus*

This is the body louse, where the lice themselves or their eggs (nits) may be visible.

E	*Candida albicans*

Candida albicans is more likely to present as an erythematous moist rash with evidence of adherent white discharge. Vulval candidiasis is more likely to be seen than the skin fold/perineal infection seen here.

38524

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Previous Question

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Feedback

End Session

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A 26-year-old man body builder presents to the Dermatology Clinic with an itchy rash on his upper left chest, shown below.

He maintains that he takes no medication and works out for many hours per day.

What is the most likely cause of the rash?

Your answer was incorrect

A	Dermatitis herpetiformis
B	Tinea corporis
C	Body wash
D	Anabolic steroid abuse
E	Impetigo

Explanation

D	Anabolic steroid abuse

This is an acneiform eruption consisting of pustules, papules and nodules, and a localised folliculitis on the upper chest. Anabolic steroids are a common cause of iatrogenic acne, and given his body building must be considered a possibility.

C	Body wash

Although an allergic reaction to body wash is possible, a generalised rash rather than the localised changes seen here would be expected.

A	Dermatitis herpetiformis

Dermatitis herpetiformis is associated with generalised papules and blisters and often with symptoms of gluten sensitive enteropathy, rather than the localised rash in an otherwise well patient seen here.

B	Tinea corporis

Tinea corporis is seen as a scaly erythematous lesion which gradually enlarges, associated with clearance from the centre.

E	Impetigo

Impetigo is a common skin infection usually occurring on the face, and is associated with honey coloured crusted plaques of infection.

39097

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Previous Question

Tag Question

Feedback

End Session

Difficulty: Easy

A 55-year-old man comes to the Dermatology Clinic for review, following admission to hospital with a third episode of right lower lobe pneumonia in the past two years. He has received several rotating courses of antibiotics from the Community Respiratory Nursing Service and still has a chronic cough, productive of thick, yellow sputum.

On examination, there are coarse crackles at both lung bases on auscultation, with wheeze throughout. There is lymphoedema affecting both lower limbs.

A picture of his hands is shown below:

Which of the following is the most likely cause of his recurrent respiratory tract infections (RTIs)?

Your answer was incorrect

A	Chronic obstructive pulmonary disease (COPD)
B	Bronchiectasis
C	Granulomatosis with polyangiitis (GPA)

Dr. Jamil Alrajhi
Apr 6, 2025

D	Sarcoidosis
E	Idiopathic pulmonary fibrosis (IPF)

Explanation

B	Bronchiectasis

This patient has yellow nail discolouration with nail dystrophy. Coupled with evidence of recurrent lower respiratory tract infections, persistent crackles on auscultation and lymphoedema, the most likely cause of his recurrent respiratory tract infections is bronchiectasis, related to underlying yellow nail syndrome. Pleural effusions are also seen in the condition.

D	Sarcoidosis

Sarcoidosis is associated with hilar lymphadenopathy and, over the longer term, with pulmonary fibrosis in active disease. It does not fit with nail dystrophy, lymphoedema and recurrent respiratory tract infections seen here.

A	Chronic obstructive pulmonary disease (COPD)

We are not given a history of smoking here, and nail dystrophy and lymphoedema, as seen here, are inconsistent with a diagnosis of COPD.

C	Granulomatosis with polyangiitis (GPA)

GPA is associated with pulmonary infiltration, coupled with evidence of renal vasculitis. It carries an acute presentation, often with evidence of haemoptysis.

E	Idiopathic pulmonary fibrosis (IPF)

IPF is associated with crackles on auscultation of the chest, but with finger clubbing, rather than nail dystrophy as seen here.

An 18-year-old man presents to his General Practitioner (GP) with a 1-day history of a non-blanching rash down his legs and buttocks, seen below, and abdominal pain. He has recently been started on antibiotics for a sore throat.

Given the likely diagnosis, which of the following is likely to be present in this patient?

Your answer was incorrect

A	Deposition of immunoglobulin A (IgA) immune complexes on histology
B	Haematuria
C	Thrombocytopenia
D	Prolonged prothrombin time and activated partial thromboplastin time

E	Mouth ulcers

Explanation

A	Deposition of immunoglobulin A (IgA) immune complexes on histology

The purpuric rash on the legs with abdominal pain is in keeping with Henoch–Schönlein purpura (HSP). Perivascular deposits of IgA are characteristic and help to differentiate HSP from other vasculitic disorders.

Image source: https://commons.wikimedia.org/wiki/File:Purpuraschoenleinhennoch2.JPG

E	Mouth ulcers

Mouth ulceration is not associated with HSP but may be seen in other conditions such as Behcet's disease and Ulcerative colitis.

B	Haematuria

At diagnosis, urinalysis is usually normal, although these can develop over time and haematuria is associated with a risk of future relapse.

C	Thrombocytopenia

Thrombocytopenia is not seen in HSP. The full blood count may show a normochromic anaemia due to recent overt gastrointestinal bleeding.

D	Prolonged prothrombin time and activated partial thromboplastin time

Prothrombin time (PT) and activated partial thromboplastin time (aPTT) are normal in HSP. When both are prolonged causes include disseminated intravascular coagulation, liver disease, vitamin K deficiency and supratherapeutic doses of warfarin or heparin.

An 18-year-old man comes to the Dermatology Clinic having recently returned from a charity visit to a northern Thai beach resort. He has a very itchy ‘creeping’ eruption on the soles of both his feet.

On examination, he has linear tracks on the feet, some of which have secondary blistering, crusting and bacterial infection. A diagnosis of cutaneous larva migrans is made.

Which of the following is most likely to harbour the infection?

Your answer was incorrect

A	Dog
B	Fish
C	Sand fly
D	Red ant
E	Turkey

Explanation

A	Dog

Cutaneous larva migrans is a parasitic skin infection caused by hookworm that usually infect domestic animals such as dogs, cats and sometimes cattle. In the animal host, the larvae penetrate the skin and reach the blood. They mature in the intestine and lay eggs, which are excreted in the faeces. The larvae are found in beaches and moist soils contaminated with animal faeces. Albendazole and ivermectin are potential interventions.

E	Turkey

Turkeys suffer from caecal worms, which carry the protozoan parasite *Histomonas*; this leads to death in the turkeys, but isn’t a cause of human disease.

B	Fish

Fish tapeworm leads to intestinal infection from uncooked freshwater fish, and is a potential problem with respect to eating sushi.

C	Sand fly

Sand fly bites lead to the development cutaneous leishmaniasis, rather than cutaneous larva migrans.

D	Red ant

Allergic dermatitis may be rarely seen in patients bitten by red ants, although it doesn't lead to the development of cutaneous larva migrans.

38312

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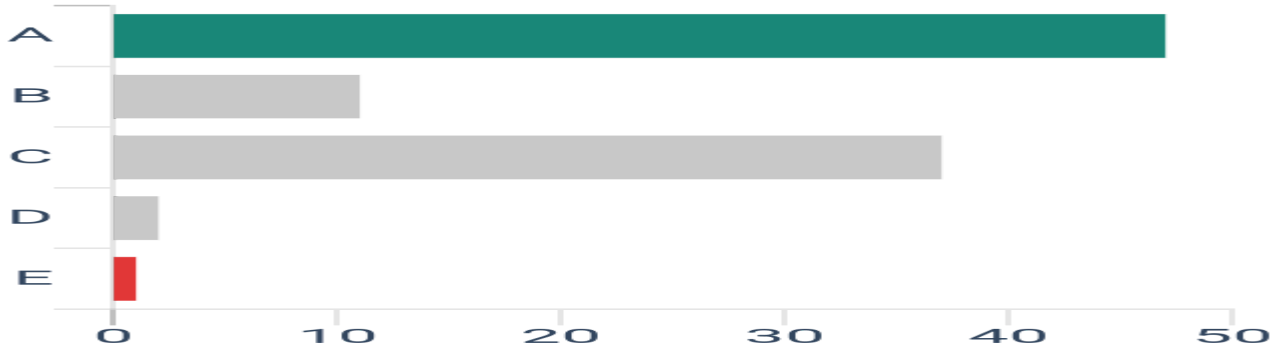

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A 35-year-old woman comes to the Dermatology Clinic for review. Her main complaint is of unsightly skin changes affecting her neck and axillae.

She is under follow-up with the Ophthalmologists after angioid streaks were identified affecting both retinae, and she has been feeling increasingly tired over the past few months.

A picture of her right axilla is shown below:

Dr. Jamil Alrajhi

Apr 6, 2025

Which of the following is she most likely to be suffering from?

Your answer was incorrect

A	Aortic stenosis
B	Gastrointestinal haemorrhage
C	Hypothyroidism
D	Interstitial cystitis

E	Lens dislocation

Explanation

B	Gastrointestinal haemorrhage

The axillary changes seen in this patient are consistent with pseudoxanthoma elasticum (PXE), which is also associated with angioid streaks affecting the retina. It is caused by a mutation in the *ABCC6* gene, which leads to accumulation of calcium and other minerals in elastic fibres of the skin, eyes and blood vessels. Increasing fragility of blood vessels in the gastrointestinal tract can lead to gastrointestinal haemorrhage, which may account for the tiredness seen here.

E	Lens dislocation

Lens dislocation is associated with Marfan syndrome. Features of Marfan syndrome, including arachnodactyly and recurrent joint dislocation, are absent from this scenario, although angioid streaks are seen in patients with the disease.

A	Aortic stenosis

Aortic stenosis is not a feature of PXE, although both mitral valve prolapse and coronary artery calcification are noted in patients with long-standing disease.

C	Hypothyroidism

Hypothyroidism is not associated with PXE, although PXE may be seen in patients with Down syndrome, which is also associated with hypothyroidism.

D	Interstitial cystitis

Urinary tract haemorrhage is seen in patients with PXE. This is not due to interstitial nephritis; it is usually as a result of vessel fragility.

71609

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A 68-year-old man is under the care of the Haematology team. He is undergoing chemotherapy for non-Hodgkin's lymphoma. He has been extensively investigated for left-sided chest pain and a recent angiogram demonstrated normal coronaries.

On the ward, the nursing staff noticed this rash on his back the previous day:

Which of the following medications should be prescribed?

Your answer was incorrect

A	Flucloxacillin 500 mg QDS
B	Aciclovir 800 mg five times daily
C	Topical acyclovir QDS
D	Morphine sulphate tablets 30 mg BD

E	Prednisolone 30 mg OD

Explanation

B	Aciclovir 800 mg five times daily

This gentleman has herpes zoster infection affecting a thoracic dermatome. Herpes zoster occurs in people who have previously had chickenpox. The herpes varicella zoster virus lies dormant in the dorsal root ganglion following chickenpox, and later travels down the cutaneous nerves to infect the epidermal cells. The prodromal period is followed by a rash consisting of a group of vesicles on an erythematous background, followed by weeping and crusting; healing takes 3–4 weeks. The rash is nearly always unilateral and confined to one or two dermatomes. Oral antiviral agents such as aciclovir at a high dose are only beneficial if given in the first 48 h of the development of blisters. Regular analgesics are important, but in the elderly – particularly if given as soon as the rash appears – prophylactic amitriptyline at night starting at 25 mg and increasing to 75 mg can help prevent post-herpetic neuralgia.

D	Morphine sulphate tablets 30 mg BD

Pain relief alone is not appropriate, given that this man is undergoing treatment for Hodgkin's lymphoma and is likely to be immunosuppressed.

A	Flucloxacillin 500 mg QDS

This patient's rash is viral in origin, and flucloxacillin therefore has no value in its management.

C	Topical acyclovir QDS

Topical acyclovir is ineffective in the treatment of herpes zoster, and thus it isn't an optimal intervention here.

E	Prednisolone 30 mg OD

Corticosteroids in this situation may drive persistent or more generalised zoster infection.

A 60-year-old woman presents to her General Practitioner (GP) with a sudden-onset, widespread, erythematous rash, covering 95% of her body. The rash was precipitated by a course of intravenous (IV) vancomycin which has now been discontinued.

What would you now expect to happen to this rash?

Your answer was incorrect

A	Ulceration
B	Desquamation followed by post-inflammatory pigmentation
C	Lichenification
D	Complete resolution to normal skin within 3 weeks
E	Induration and fibrosis

Explanation

B	Desquamation followed by post-inflammatory pigmentation

The diagnosis here is exfoliative dermatitis. The erythematous skin begins to desquamate around days 2-6, and this is followed by pigmentation (similar to tanning after sunburn). The pigmentary change (usually hyper- but can be hypo-) can be permanent, or may resolve after a few months.

D	Complete resolution to normal skin within 3 weeks

Pigmentary changes seen after exfoliative dermatitis usually takes a few months to completely resolve.

A	Ulceration

Ulceration is seen in Stevens-Johnson syndrome as it progresses, which doesn't fit with the presentation seen here.

C	Lichenification

Lichenification is a manifestation of chronic pruritic skin disorders driven by recurrent scratching and epidermal hypertrophy, not with the acute erythroderma seen here.

E	Induration and fibrosis

Induration and fibrosis is seen primarily in fibrotic skin diseases such as systemic sclerosis.

39067

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Difficulty: Average

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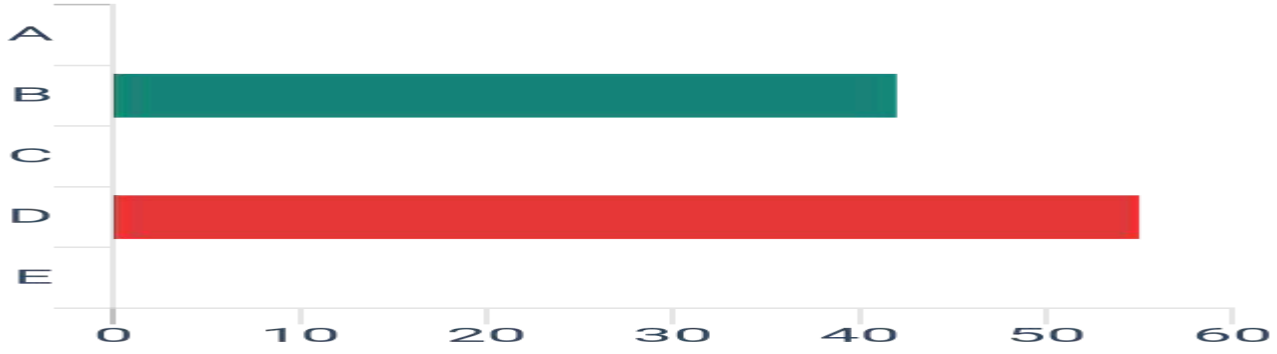

A 32-year-old man, who is known to suffer with anxiety and depression, presents to his General Practitioner (GP) with an intensely itchy, erythematous patch on his lower leg. He recognises and admits that the rash is worse after itching. There are no other skin problems noted elsewhere.

You plan to prescribe an occlusive treatment to help moisturise the skin over the leg.

Which of the following is likely to have the most occlusive effect?

Your answer was incorrect

A	Ointments
B	Gels
C	Creams
D	Lotions

E	Foam

Explanation

A	Ointments

Ointments are 80% oil and 20% water. These products feel greasy, do not absorb well and are generally not easy to use on large areas. They are ‘occlusive,’ which means they trap moisture and heat in very well. Ointments promote medication absorption over all other formulations.

D	Lotions

Lotions are thinner than creams, they absorb very quickly and feel very light on the skin. They are easier to distribute on hairy areas, but do not retain significant moisture over the skin surface.

B	Gels

Gels are emulsions that contain oil-in-water. They usually have an alcohol base. They dry into a thin, greaseless, film. Like lotions and foams, they are ideal for spreading on hairy areas and large areas.

C	Creams

Creams are a semi-solid emulsion, half oil and half water. This formulation is typically the easiest to use and is preferred by most patients. They spread easily, absorb quickly and wash off with water. They have a medium viscosity, and are reasonably hydrating without feeling too heavy on your skin.

E	Foam

Foams are pressurised collections of gaseous bubbles in a matrix of liquid film. Foam preparations spread readily and are easier to apply than other preparations.

40086

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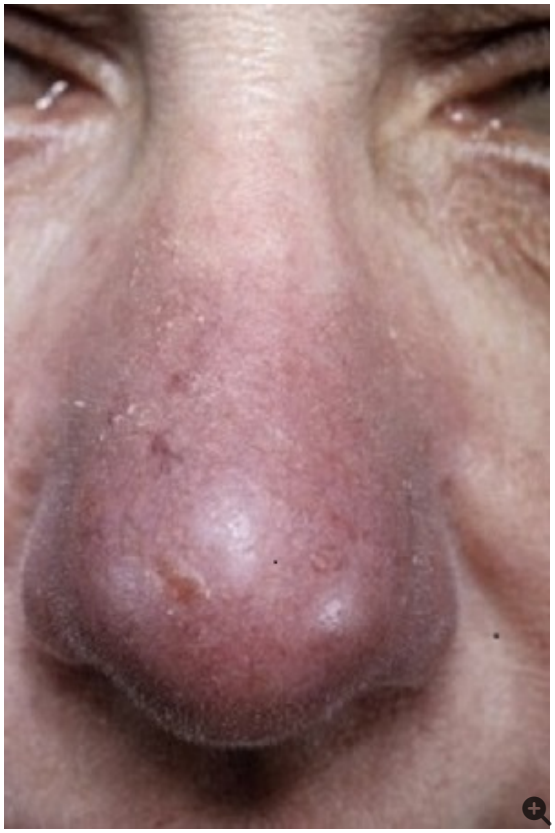
A 41-year-old man presents to the General Medical Clinic complaining of changes to his nose which are not subsiding. He has noticed his nose changing in colour without any other symptoms over a period of a few months. Other than this, he has been feeling well in himself.

He has a past medical history of a prolapsed lumbar disc and type II diabetes. He takes no regular medications.

A photograph of his nose is shown below:



Dr. Jamil Alrajhi

Apr 6, 2025

Multiple investigations are requested, including routine blood tests, a chest X-ray (CXR), electrocardiogram (ECG) and echocardiogram (ECHO), but no abnormalities are detected.

What is the most appropriate medical treatment for this patient?

Your answer was incorrect

A	Topical metronidazole
B	Corticosteroids
C	Flucloxacillin

D	Metformin
E	Surgical referral

Explanation

B	Corticosteroids

This patient has lupus pernio without any other evidence of systemic sarcoidosis. Lupus pernio is a form of cutaneous sarcoidosis which typically presents with an asymptomatic violaceous set of nodules and plaques over the nose, cheek and/or ears. It more commonly affects women and patients of African American descent. Sarcoidosis is a chronic cell-mediated response to an unknown antigen in which macrophages and CD4 cells release cytokines that cause granulomas to form. Biopsy reveals non-caseating granulomas. In 75% of patients, there is pulmonary involvement, making respiratory investigations important. Treatment for lupus pernio can involve topical or systemic steroids, but sometimes requires systemic treatment such as methotrexate, hydroxychloroquine and biological therapy.

C	Flucloxacillin

Flucloxacillin could be considered for cellulitis or simple bacterial dermatological infections. However, this is typically characterised by an acutely inflamed rash arising over a short time, often with systemic involvement. The appearance and history do not match this.

A	Topical metronidazole

This would have been an appropriate management option for rhinophyma. Rhinophyma is a condition in which the sebaceous glands of the nose are enlarged with erythema of the nose, as well as overlying telangiectasia.

D	Metformin

Metformin is a first-line medical treatment for type 2 diabetes mellitus. Diabetes can present with various dermatological complications such as increase in frequency of cellulitis and necrobiosis lipoidica. The latter is characterised by waxy lesions, but even in such cases improving diabetic control does not remove the lesion.

E	Surgical referral

Surgical referral would be an appropriate consideration if this lesion had appeared malignant. However, such lesions usually present as a single nodule, which is likely to ulcerate. The lack of a specifically defined lesion makes a malignant cause less likely.

Rate this question:

A 62-year-old woman presents to the Dermatology Clinic with a rash on her neck. She has recently been spending time volunteering building a shed with her grandchildren, who noticed the rash. It is erythematous and mildly tender.

She has a background of previous deep vein thrombosis (DVT) in her right leg, and atrial fibrillation (AF). She leads an active life and has noted some recent weight loss. After a recent checkup at her General Practitioner (GP) for a rash on her face featuring telangiectasia and pustules, some medication was added.

Her medication includes paracetamol, cetirizine, warfarin, bisoprolol, doxycycline and sertraline.

A photograph of her skin is shown below:

What is the most likely diagnosis?

Your answer was incorrect

A	Dermatomyositis (DM)
B	Doxycycline-induced photosensitivity
C	Porphyria cutanea tarda (PCT)
D	Systemic lupus erythematosus (SLE)
E	Warfarin-induced photosensitivity

Explanation

B	Doxycycline-induced photosensitivity

This history suggests a photosensitive rash, with the patient spending significant time outside and a rash in a sun-exposed region. All the possible answers suggest photosensitivity. The recent medication change is the key in this answer. The most likely drug in her history to cause photosensitivity is **doxycycline** , notorious for causing photosensitivity. It is probable that this patient has been started on doxycycline for rosacea. This must be considered most likely in the absence of other systemic symptoms.

C	Porphyria cutanea tarda (PCT)

PCT is the most common type of porphyria and is due to a defective enzyme (uroporphyrinogen decarboxylase), leading to a disorder in haematological production. This manifests as fragility of the skin, particularly on the back of the hands, and photosensitivity. While the rash in this question is photosensitive, PCT is more commonly associated with sores or blisters on the hands, with the formation of milia as the blisters heal.

A	Dermatomyositis (DM)

While this rash does present in a similar way to the ‘shawl sign’ of DM, the absence of other symptoms makes this significantly less likely. With DM, one would expect periorbital oedema, metacarpophalangeal (MCP) papules or systemic symptoms such as significant unintentional weight loss or night sweats. The weight loss in this history is suggested to be intentional.

D	Systemic lupus erythematosus (SLE)

SLE is a multi-system disorder featuring a wide range of symptoms, including photosensitive rash. However, to reach a diagnosis, one would expect more systemic symptoms, including arthralgia, mouth ulcers or renal impairment. Drugs can induce SLE, including hydralazine, quinidine, isoniazid, minocycline and methyldopa; therefore, a thorough drug history is essential in these patients. The medications being taken by this patient are not likely to cause SLE.

E	Warfarin-induced photosensitivity

It is likely here that this is drug-induced photosensitivity. Therefore, the challenge is to identify the most likely offending drug. While it is theoretically possible for warfarin to cause photosensitivity, it is much more likely to be linked to antibiotics, such as doxycycline, non-steroidal anti-inflammatory drugs (NSAIDs) or diuretics. Therefore, this is not the correct answer.

An 18-year-old man presents to the Dermatology Clinic with a 3-week history of a rash across his trunk. He is otherwise well and denies any associated pain, itching or fever. Recently, he had a mild cough and cold that resolved spontaneously.

There is no past medical history of note and he does not take any regular medications.

His rash is examined and is shown below:

What is the recommended management for this patient?

Your answer was incorrect

A	PO aciclovir
B	PO prednisolone
C	Reassurance and discharge
D	Topical betamethasone 0.1%

E	Topical ketoconazole

Explanation

C	Reassurance and discharge

This patient has a diagnosis of pityriasis rosea, a self-limiting rash that characteristically develops after the appearance of a single pink/red patch called a herald patch. The rash then proceeds to spread in a fir-tree pattern, typically over the trunk. Viral symptoms can occur before the onset of the rash, but often patients can be asymptomatic and are generally well. In most cases, treatment is unnecessary as the rash will self-resolve after 2–3 months. In certain instances, patients may experience significant itching, in which case antihistamines, topical emollients or corticosteroids may be needed. In this case, treatment is not indicated due to this patient's absence of symptoms.

D	Topical betamethasone 0.1%

Topical betamethasone is a potent corticosteroid used in the management of significant eczema or psoriasis. Although corticosteroids can be used in the management of pityriasis rosea in cases of significant itch, betamethasone is not the first-line choice. If corticosteroids are required, topical hydrocortisone would be preferred due to its lower potency and reduced risk of side-effects.

A	PO aciclovir

PO aciclovir is indicated for viral illnesses, particularly those caused by herpes simplex or varicella-zoster virus. However, these rashes tend to have a vesicular appearance, which is not demonstrated here. Aciclovir does not play a role in the management of pityriasis rosea.

B	PO prednisolone

PO prednisolone can be used to treat some rashes, including lichen planus, an itchy rash that appears as flat-topped plaques. However, it is not used in the management of pityriasis rosea.

E	Topical ketoconazole

Topical ketoconazole is used in the management of pityriasis versicolor, a fungal skin infection caused by the yeast *Malassezia furfur*, which is commonly found as a skin-colonising organism. Pityriasis versicolor presents with either hypo- or hyperpigmented patches on the skin, with associated fine scale. The condition is also associated with hot weather, with triggers including a recent holiday to a warm destination.

Rate this question:

A 24-year-old woman with sarcoidosis is admitted to hospital with diarrhoea. She has been previously fit and well and her sarcoid has been stable. Currently, she is under the care of the Dermatology Department for the management of a painful rash on her left leg.

An image of the rash is seen below:

While an in-patient, the diarrhoea clears up and the stool cultures return negative. She recalls that the Dermatologists commenced her on medication for the painful rash but cannot remember its name and she didn't bring the tablets with her to hospital.

What is the most likely medication commenced by the Dermatology Department?

Your answer was incorrect

A	Colchicine
B	Prednisolone

C	Aspirin
D	Dapsone
E	Potassium iodide

Explanation

A	Colchicine

Colchicine is occasionally used for the treatment of erythema nodosum where it is particularly painful or disfiguring. It is the only one of the options to cause significant diarrhoea, making it the most likely answer here. Other causes of erythema nodosum include streptococcal infection, tuberculosis, Salmonella, Campylobacter, histoplasmosis, ulcerative colitis and Crohn's disease, sulphonamides, Behçet's disease and pregnancy.

Image Source: https://commons.wikimedia.org/wiki/File:Heraldpatch2.jpg Medicalpal, CC BY-SA 4.0 , via Wikimedia Commons

C	Aspirin

Aspirin is not used as a treatment for erythema nodosum or in the treatment of sarcoidosis, it is therefore not the correct answer here.

B	Prednisolone

Although prednisolone is used for the treatment of sarcoidosis, it would not be expected to cause diarrhoea.

D	Dapsone

Dapsone is an alternative treatment for erythema nodosum but is not a prominent cause of diarrhoea.

E	Potassium iodide

This is used as a topical therapy for the treatment of erythema nodosum and would therefore not lead to any GI toxicity.

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A 56-year-old man is referred to the Dermatology Clinic by his General Practitioner (GP) with a recent history of weight loss and worsening constipation.

Clinical examination is unremarkable, other than a rash in his axillae, and blood investigations which reveal a mild anaemia.

Which one of the following test results is likely to be encountered?

Your answer was correct

A	Raised T3/T4 and low TSH
B	Positive direct immunofluorescence
C	Low Vitamin D levels
D	Raised levels of carcinoembryonic antigen (CEA)
E	Positive patch testing to common antiperspirant agents

Explanation

D	Raised levels of carcinoembryonic antigen (CEA)

Acanthosis nigricans is linked with obesity and various endocrine disorders associated with insulin resistance such as diabetes, acromegaly and Cushing's syndrome. More rarely it is a paraneoplastic manifestation particularly of the gastrointestinal tract. The CEA test measures the amount of this protein in the serum and is often raised in people with certain kinds of cancers, especially cancer of the large intestine (colon and rectum).

A	Raised T3/T4 and low TSH

Acanthosis nigricans is a diffuse velvety thickening and hyperpigmentation of the skin. It occurs mainly in the axillae and other intertriginous areas. It is linked to various endocrine disorders including hypothyroidism, but not hyperthyroidism.

B	Positive direct immunofluorescence

Direct immunofluorescence is a technique that involves the application of fluorescent antibodies to samples of patient tissue obtained from biopsies, and is used in dermatological practice in order to confirm the diagnosis of suspected autoimmune bullous diseases, connective tissue diseases and vasculitides.

C	Low Vitamin D levels

Acanthosis nigricans is not linked to vitamin D deficiency.

E	Positive patch testing to common antiperspirant agents

Patch testing is used to help confirm the presence of contact allergic reactions. These typically cause itchy, dermatitic skin rashes and are unrelated to acanthosis nigricans.

8565

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Difficulty: Easy

A 65-year-old woman visits her General Practitioner (GP). She complains of localised hair loss in the vertex of her scalp, associated with itching irritation.

What is the most likely diagnosis?

Your answer was incorrect

Dr. Jamil Alrajhi
Apr 6, 2025

A	Cicatricial alopecia
B	Alopecia areata
C	Androgenetic alopecia
D	Trichotillomania
E	Telogen effluvium

Explanation

A	Cicatricial alopecia

In cicatricial alopecia (also known as scarring alopecia) inflammation injures hair follicles resulting in permanent bald patches with no visible follicles. In this case the presence of inflammation can be seen as redness, scaling and crusting. Common causes for cicatricial alopecia include discoid lupus erythematosus, and lichen

planopilaris (a variant of lichen planus). Treatment is dependent on the underlying causes but often requires topical corticosteroids. Given the fact some hair follicles have been destroyed and no regeneration is possible, treatment is aimed at reducing the amount of inflammation and minimising further hair loss

D	Trichotillomania

Trichotillomania describes a psychological disorder where patients are compelled to pull their own hair, resulting in alopecia. It is typically encountered in teenage females and children, leading to irregular patches of alopecia that are not commonly associated with a scarring process unless encountered in chronic, severe forms.

B	Alopecia areata

Alopecia areata (AA) is a condition characterised by recurrent non-scarring patches of hair loss that can affect any hair-bearing area of skin. In the areas affected, the skin is normal in appearance. In the periphery there may be short, broken hairs that taper at the proximal end (exclamation point hairs) — this is a pathognomonic sign but is not always present. Patients may also complain of pruritus or a burning sensation in the affected skin areas. AA can occur at any age and affects both sexes equally. The natural history of the condition is unpredictable with no correlation existing between the number of patches at onset and the subsequent severity of the disease. Precipitating factors can be found in some patients but not all patients, and include: stressful events, febrile illnesses, drugs and pregnancy.

C	Androgenetic alopecia

Androgenetic alopecia (also known as pattern hair loss) does not cause erythema, scale and crusting. It occurs due to genetic factors and hormonal influences. Androgenetic alopecia is apparent is about 50% of individual; by the age of 50 years. Typically, in men it affects the vertex and temporal scalp, whereas in women it is more diffuse and worst on the anterior scalp.

E	Telogen effluvium

Telogen effluvium is a diffuse, temporary, non-scarring form of alopecia where hair is lost 2-3 months following stressful events such as severe illnesses, accidents and childbirth. Telogen effluvium is self-limiting and requires no medical interventions.

A 32-year-old woman presents to her Primary Care Clinic with a complaint of painful sores at the corners of her mouth. The lesions have been persistent for several weeks and are associated with a mild burning sensation when she eats. She has a past medical history of irritable bowel syndrome but is otherwise healthy. On examination, erythematous cracks and fissures are observed bilaterally at the corners of her mouth. There is no lymphadenopathy, and the rest of her oral mucosa is unremarkable. She reports no recent weight loss or changes in diet.

Investigations:

Investigation	Result	Normal value
Haemoglobin (Hb)	112 g/l	135–175 g/l
Mean corpuscular volume (MCV)	78 fl	80–100 fl
Serum ferritin	8 µg/l	15–200 µg/l
Vitamin B12	300 pg/ml	200–900 pg/ml
Folate	5 ng/ml	2–20 ng/ml

What is the most likely underlying cause of this patient's angular stomatitis?

Your answer was incorrect

A	Vitamin B12 deficiency
B	Iron deficiency
C	Vitamin C deficiency
D	Herpes simplex virus infection
E	Fungal infection

Explanation

B	Iron deficiency

Iron deficiency is a common cause of angular stomatitis due to its role in maintaining the integrity of epithelial tissues. The patient's low Hb level, low MCV and low ferritin level indicate iron deficiency anaemia, which is likely contributing to her symptoms.

C	Vitamin C deficiency

Vitamin C deficiency can cause oral symptoms, such as bleeding gums and poor wound healing, but it is less commonly associated with angular stomatitis. There are no other signs of scurvy (eg bleeding gums, petechiae) in this patient, making it an unlikely cause.

A	Vitamin B12 deficiency

Vitamin B12 deficiency may cause angular stomatitis in severe cases, along with other oral manifestations such as glossitis. However, this patient's vitamin B12 level is within the normal range, making this an unlikely cause.

D	Herpes simplex virus infection

Herpes simplex virus (HSV) infection typically presents with painful vesicular lesions rather than with chronic fissures at the mouth corners. HSV lesions are also usually recurrent and present with clusters of vesicles, which are not seen in this patient's presentation.

E	Fungal infection

Fungal infections, especially those with *Candida* species, can lead to angular stomatitis. However, candidal infections are more commonly seen in immunocompromised patients or those with poor oral hygiene or dentures. This patient's low Hb and ferritin levels suggest an underlying nutritional deficiency rather than an infectious cause.

A 57-year-old woman presents to the Dermatology Clinic with hair loss, distributed on the front and crown of her scalp but sparing the sides.

She denied using braids, straighteners, tongs or wearing a ponytail. She had no other significant medical problems.

What is the most appropriate initial intervention to treat her hair loss?

Your answer was correct

A	Topical Minoxidil
B	Oral Minoxidil
C	Laser therapy
D	Topical steroids
E	Antifungal shampoo

Explanation

A	Topical Minoxidil

This patient has hair loss in a pattern either related to androgen excess or to increased sensitivity to androgens. Topical treatment of choice is minoxidil, which promotes hair re-growth. Other options include systemic anti-androgens such as finasteride.

B	Oral Minoxidil

Oral minoxidil is a vasodilator used for resistant hypertension, and it was found in clinical trials to stimulate hair growth as a side-effect of therapy.

C	Laser therapy

Laser therapy is of course used for hair removal rather than to stimulate hair growth.

D	Topical steroids

Topical steroids are used in scarring alopecia to reduce inflammation.

E	Antifungal shampoo

Anti-fungal shampoo is used to treat seborrheic dermatitis and pityriasis versicolor.

39073

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Difficulty: Easy

A 42-year-old man with no previous cardiovascular events presents for evaluation of persistently elevated cholesterol levels. He reports a family history of heart disease, with his father suffering a myocardial infarction at the age of 50 years. On examination, there are xanthomas on his elbows and Achilles tendons. His lipid profile reveals a total cholesterol level of 9.0 mmol/l and a low-density lipoprotein (LDL) cholesterol level of 7.5 mmol/l. Genetic testing confirms a diagnosis of heterozygous familial hypercholesterolaemia (FH).

What is the most appropriate management plan for this patient?

Your answer was incorrect

A	Lifestyle changes alone, with dietary counselling
B	Initiate a high-intensity statin and consider adding ezetimibe if LDL cholesterol target levels are not met
C	Start inclisiran
D	Prescribe a bile acid sequestrant as monotherapy
E	Start a fibrate and monitor lipid levels after six months

Explanation

B	Initiate a high-intensity statin and consider adding ezetimibe if LDL cholesterol target levels are not met

This is the correct answer. High-intensity statins, such as atorvastatin or rosuvastatin, are first-line agents for significantly lowering LDL cholesterol levels in patients with FH. If LDL cholesterol target levels are not reached, ezetimibe can be added to achieve further reduction. This approach aligns with current guidelines for managing FH to lower cardiovascular risk.

E	Start a fibrate and monitor lipid levels after six months

Fibrates primarily reduce triglyceride levels and have a limited effect on LDL cholesterol levels. They are not typically used as first-line therapy for FH where aggressive LDL cholesterol reduction is essential. Statins are preferred for achieving significant LDL cholesterol reductions.

A	Lifestyle changes alone, with dietary counselling

While lifestyle modifications and dietary counselling are important supportive measures, they are insufficient for FH. Due to the genetic nature of FH and markedly elevated LDL cholesterol levels, pharmacological intervention is necessary to achieve significant reductions.

C	Start inclisiran

Inclisiran, a small interfering RNA therapy, reduces LDL cholesterol levels by inhibiting PCSK9 production. It is approved for use in primary hypercholesterolaemia and as adjunctive therapy in FH when statin therapy alone does not achieve LDL cholesterol target levels. However, it is generally added only if patients do not achieve LDL cholesterol target levels with a statin and ezetimibe combination.

D	Prescribe a bile acid sequestrant as monotherapy

Bile acid sequestrants can be used as an adjunct to statin therapy but are not recommended as monotherapy for FH, given their limited LDL cholesterol-lowering capacity and the risk of GI side-effects. Statins remain the mainstay of treatment.

74420

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Difficulty: Average

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A 60-year-old man presents to his General Practitioner (GP) with a one week history of painful mouth ulcers and blistering lesions over the face and upper body. He also complains of some general malaise.

On examination, he has evidence of gingival erosions and bullae over the scalp and chest. The lesionsare friable, and some have crusted over. A Nikolsky sign is positive.

What is the most likely cause of the presentation?

Your answer was incorrect

A	Erythema multiforme
B	Bullous pemphigoid
C	Dermatitis herpetiformis
D	Pemphigus vulgaris (PV)
E	Bullous impetigo

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

D	Pemphigus vulgaris (PV)

The answer is Pemphigus vulgaris (PV) (Option D).

PV is an autoimmune intra-epithelial, blistering disease, affecting the skin and mucous membranes, that is mediated by circulating autoantibodies directed against keratinocyte cell surfaces. It can present with erosions in the mouth and flaccid blisters on the skin. The cause of PV remains unknown, but there is a recognised association with the human leukocyte antigen DR4 (DRB1*0402) and human leukocyte antigen DRw6 (DQB1*0503) alleles. Patients often also have other autoimmune diseases, particularly myasthenia gravis and thymoma.

E	Bullous impetigo

Bullous impetigo (Option E) is incorrect.

This uncommon form of impetigo presents with small vesicles that evolve into flaccid, transparent bullae. It is due to staphylococcal exfoliative toxins, which target desmoglein 1 and cleave off the superficial epidermis.

A	Erythema multiforme

Erythema multiforme (Option A) is incorrect.

The typical target lesions of erythema multiforme have a sharp margin, a round shape and three concentric zones of colours (and possibly a blister in the middle). Erythema multiforme may involve the mouth with multiple irregular erosions. Extensive involvement of the mouth, lips, conjunctivae and genitalia is called Stevens–Johnson syndrome. Infections are probably associated with at least 90% of cases of erythema multiforme, with the most common infections being herpes simplex virus and *Mycoplasma pneumoniae*. Management is supportive.

B	Bullous pemphigoid

Bullous pemphigoid (Option B) is incorrect.

This is an immune-mediated blistering disorder that presents with tense blisters in the elderly. It uncommonly affects the mucosae and may be preceded by an itchy rash lasting from days to weeks (pre-bullous pemphigoid).

C	Dermatitis herpetiformis

Dermatitis herpetiformis (Option C) is incorrect.

Dermatitis herpetiformis occurs in close association with coeliac disease and presents with very itchy, grouped vesicles, most frequent on the extensor surface of the knees, elbows, buttocks and shoulders. Treatment is with dapsone and a gluten-free diet.

A 47-year-old obese woman presents to the Emergency Department (ED) complaining of an erythematous rash affecting her groin. She has a history of Type II diabetes for which she takes Metformin and follows a diabetic diet, but is otherwise relatively well.

On examination, her blood pressure (BP) is 152/88 mmHg. Her pulse is 80 beats per minute (bpm) and regular. There is an erythematous rash affecting the skin creases on both sides of her groin and the upper inside aspect of both thighs. Skin scrapings reveal *S. epidermidis* and *T. rubrum*.

Which of the following is the most appropriate initial intervention?

Your answer was correct

A	IV Flucloxacillin
B	Oral Flucloxacillin
C	Oral Griseofulvin
D	Oral Itraconazole
E	Topical Ketoconazole

Explanation

E	Topical Ketoconazole

The answer is Topical Ketoconazole -

Tinea cruris as a result of Trichophyton rubrum infection is the most likely cause of this patient's groin rash. In the first instance topical azole antifungal therapy is sufficient to clear infection for the majority of patients. As such topical Ketoconazole is the most appropriate initial intervention here.

A	IV Flucloxacillin

IV Flucloxacillin is incorrect because the S. epidermidis growth here is likely to represent normal skin flora rather than the cause of her rash.

B	Oral Flucloxacillin

Oral Flucloxacillin, is incorrect because the S. epidermidis growth here is likely to represent normal skin flora rather than the cause of her rash.

C	Oral Griseofulvin

Oral Griseofulvin, is incorrect because Griseofulvin inhibits fungal cell division, rather than being a fungicidal agent, as such a more prolonged course is usually required versus azole therapies. It is also associated with hepatic dysfunction and is a potent p450 inducer.

D	Oral Itraconazole

Oral Itraconazole, is incorrect, this is a potential option for patients whose infection fails to clear in response to topical therapy alone.

40418

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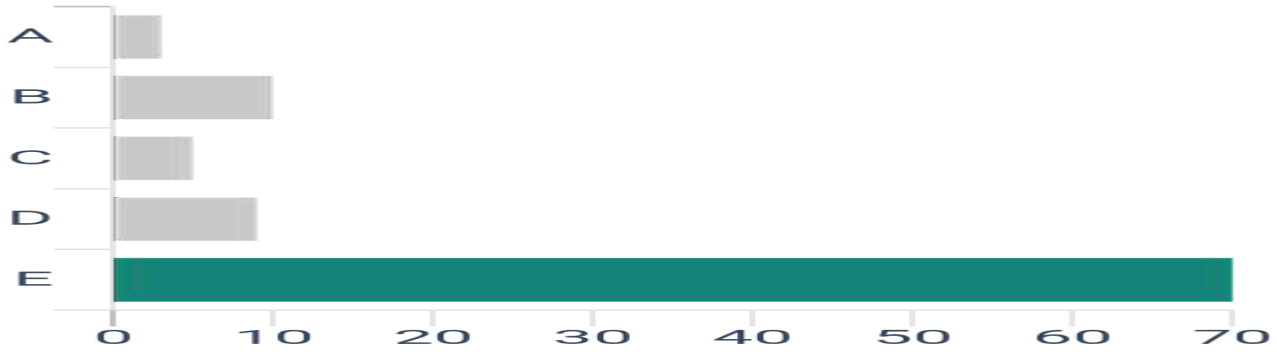

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A 50-year-old woman attends the General Practice (GP) Surgery with a long history of recurrent red marks on her torso. These slowly expand by two to three mm per day into annular shapes that clear centrally, and then fade over days to weeks, leaving normal skin.

Some of the lesions have fine scaling in their inner erythematous rim. They can reach a maximum of 10 cm in diameter. They have a seasonal preponderance, appearing every summer. She is otherwise well.

Which one of the following is the most likely diagnosis?

Your answer was incorrect

A	Erythema marginatum
B	Erythema migrans
C	Erythema induratum
D	Erythema annulare centrifugum
E	Erythema gyratum repens

Explanation

D	Erythema annulare centrifugum

EAC is an idiopathic, chronic, recurrent erythema, which is often seasonal. Triggers can be drugs or infections. Topical steroids usually cause involution of the treated lesions, but they do not prevent the occurrence of new lesions or recurrence of lesions at the original site.

E	Erythema gyratum repens

Erythema gyratum repens is a paraneoplastic skin rash consisting of urticated, wavy erythematous bands like ‘grains of wood’ most often associated with carcinoma of the lung. These expand quickly at a rate of up to 1 cm/day.

A	Erythema marginatum

Erythema marginatum is characterised by macules that spread into patches associated with acute rheumatic fever (fever, carditis, migratory polyarthritis) caused by group A beta-haemolytic streptococcal infection.

B	Erythema migrans

Erythema migrans develops 7 days after a tick bite and is a sign of Lyme disease. Lesions range from 10-50 cm in diameter and flu-like symptoms are common. Lyme serology is a key investigation when this is identified.

C	Erythema induratum

Erythema induratum of Bazin is a nodular vasculitis (tender erythematous, indurated nodules and plaques), especially on the lower legs, associated with *Mycobacterium tuberculosis*. Further investigations including chest X-ray and sputum culture are recommended when this is identified.

38308

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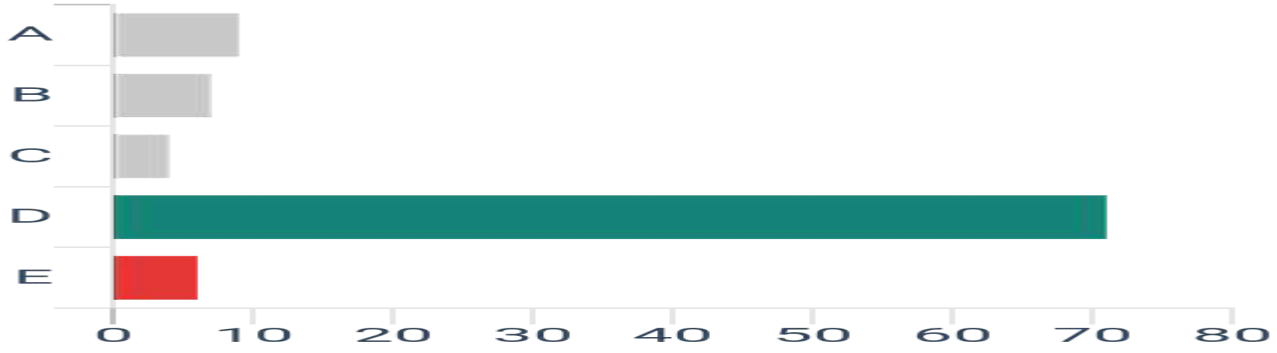

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Responses Correct:	4
Responses Incorrect:	25

A 32-year-old woman presents to her General Practitioner (GP) with a one week history of cellulitis of the middle finger of her left hand. This has occurred twice before in the last year and resolved after two to three weeks. On each occasion, she presented with cellulitis and painful lymphadenopathy of the left axilla, and was treated with intravenous (IV) antibiotics. Wound swabs, blood cultures and fungal cultures were negative.

On examination, the patient had a vesiculo-pustular plaque on the distal phalanx, with lesions on the ulnar border of the middle phalanx.

There was ascending lymphangitis on the dorsum of the left hand extending proximally to the mid-forearm, and painful lymphadenopathy.

Prolonged tissue culture for acid-fast bacilli is sent.

An X-ray of the left finger shows no bony abnormality.

Magnetic resonance imaging (MRI) of the left hand shows high signal within the soft tissue of the middle finger consistent with oedema.

What is the most appropriate management option in this case?

Your answer was incorrect

A	Aciclovir 400 mg 5 times a day
B	Anti-tuberculous therapy
C	Benzyl penicillin 1.2 g qds + flucloxacillin 1 g intravenously qds

D	Prednisolone 60 mg od
E	Surgical debridement

Explanation

A	Aciclovir 400 mg 5 times a day

The clinical features and recurrent nature at the same site are diagnostic for *Herpes simplex* infection, known on a digit as herpetic whitlow. This may cause secondary cellulitis, lymphangitis and lymphadenitis. Rarely, lymphoedema may follow. The diagnosis should be confirmed on a viral swab, usually via culture or polymerase chain reaction test. Uncomplicated disease may not require treatment, but given the complications in the scenario, aciclovir should be commenced (maximum- 2 gm per day). In recurrent disease, prophylaxis (aciclovir 400 mg bd) is appropriate.

B	Anti-tuberculous therapy

Cutaneous lesions of tuberculosis would not be episodic and the appearance in the photograph is characteristic of *Herpes simplex* infection.

C	Benzyl penicillin 1.2 g qds + flucloxacillin 1 g intravenously qds

This might be appropriate for super-added bacterial infection, but the symptoms and signs are fully compatible with *Herpes simplex* infection.

D	Prednisolone 60 mg od

This would risk worsening *Herpes simplex* infection, the diagnosis of which is clear from the photograph.

E	Surgical debridement

This has no place in the management of herpetic whitlow, the diagnosis of which is clear from the photograph.

A 36-year-old man presents to his General Practitioner (GP) with a widespread rash. He has been feeling unwell and has a poor appetite.

On examination, he is found to have an erythematous rash with areas of blistering, shown below. His lips are eroded, and multiple aphthous ulcers are noticed in the mouth. The eyes are injected.

What is the most appropriate management option for the oral ulcers?

Your answer was incorrect

A	Chlorhexidine mouthwash
B	Topical steroids
C	Intravenous (IV) flucloxacillin
D	IV immunoglobulins
E	Azathioprine

Explanation

A	Chlorhexidine mouthwash

The answer is Chlorhexidine mouthwash (Option A).

This patient has Stevens–Johnson syndrome and may require hospital admission for nutritional support and adequate skin care. The causes of Stevens–Johnson syndrome are as for erythema multiforme, but with drugs, rather than infections, being the most common culprit. It is therefore imperative to stop any recently started medications. Management is supportive. Use of chlorhexidine mouthwash may be helpful in preventing secondary infections.

C	Intravenous (IV) flucloxacillin

Intravenous (IV) flucloxacillin (Option C) is incorrect.

Antibiotics are not useful in Steven–Johnson syndrome, unless used to treat secondary bacterial infections. Throat swabs for the detection of *Streptococcus* and chest X-rays looking for evidence of *Mycoplasma pneumoniae* may be of use.

B	Topical steroids

Topical steroids (Option B) is incorrect.

There is no evidence that topical steroids are helpful in achieving faster resolution of the erosions and rash.

D	IV immunoglobulins

IV immunoglobulins (Option D) is incorrect.

IV immunoglobulins should be considered in the management of toxic epidermal necrolysis (TEN). In Stevens–Johnson syndrome, supportive care and cessation of the offending agents form the mainstay of care.

E	Azathioprine

Azathioprine (Option E) is incorrect.

This is a steroid-sparing agent used in the long-term management of a number of skin disorders such as eczema, cutaneous vasculitis, cutaneous systemic lupus erythematosus (SLE), bullous pemphigoid and pemphigus vulgaris.

33389

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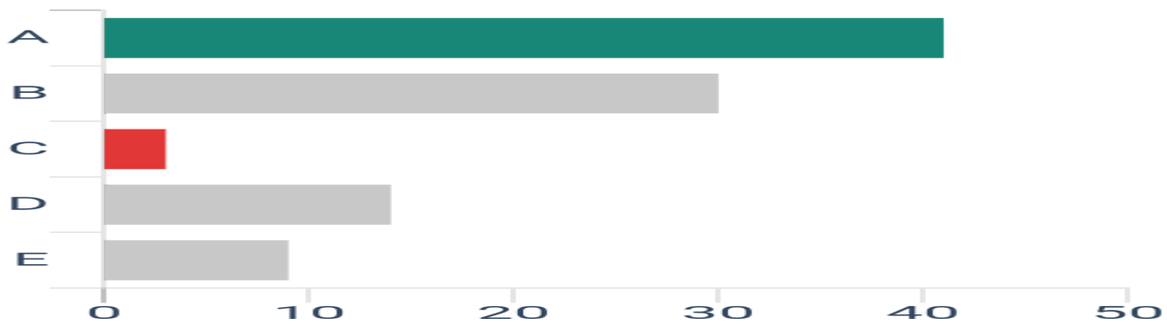

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Responses Correct: 4

Responses Incorrect: 27

A 40-year-old man presents to the Dermatology Clinic with reddish skin lesions on the tongue, cheeks and nose for the past year. He gives a past history of frequent moderate to severe nasal bleeding since childhood. He had received a blood transfusion twice for correction of his anaemia.

On further enquiry, he states that he has had two episodes of black, tarry stools over the past three months. A picture of his facial lesions is shown below:

Which of the following is characteristic of this patient's condition?

Your answer was incorrect

A	An unremarkable family history
B	Autosomal recessive inheritance
C	Multiple mucocutaneous telangiectasia
D	Recurrent epistaxis due to platelet dysfunction
E	Recurrent gastrointestinal haemorrhage due to increased predisposition to peptic ulcer disease

Explanation

C	Multiple mucocutaneous telangiectasia

Hereditary haemorrhagic telangiectasia (HHT) is inherited as an autosomal dominant trait, with variable penetrance and expression. Telangiectasia of the skin and buccal mucosa are seen in the majority of individuals with HHT in later life. They mostly occur on the lips, tongue, buccal mucosa and fingertips.

Image credit: CC BY 2.5 https://commons.wikimedia.org/wiki/File:HereditaryHemorrhagicTelangiectasia.jpg

B	Autosomal recessive inheritance

The inheritance pattern for HHT is autosomal dominant, so autosomal recessive inheritance is not appropriate here.

A	An unremarkable family history

The three major disease-associated genes include ENG, ACVRL1 and SMAD4. The presence of the disease in a first-degree relative is one of the diagnostic criteria. Hence, an unremarkable family history is not characteristic of this disease.

D	Recurrent epistaxis due to platelet dysfunction

The skin lesions in this patient are indicative of abnormal dilated capillaries on the tongue, cheeks and nose. The skin lesions, along with the clinical presentation, make the diagnosis of HHT likely. The most common clinical manifestation of HHT is spontaneous, recurrent epistaxis from a telangiectatic lesion in the nasal mucosa. Epistaxis does not occur due to platelet dysfunction in these patients.

E	Recurrent gastrointestinal haemorrhage due to increased predisposition to peptic ulcer disease

Arteriovenous malformations (AVMs) can occur in a number of organs such as the lung, brain and liver. Cerebrovascular accidents and transient ischaemic attacks occur in patients with AVMs in the brain and can result in significant morbidity and mortality. Hence, it is much more likely for this patient to have recurrent gastrointestinal haemorrhage from visceral AVMs, rather than from peptic ulcer disease.

A 50-year-old man presents to the Emergency Department (ED) with an enlarging rash over his shin, which was associated with significant swelling and discomfort. Four days earlier, he had undergone a surgical procedure to his varicose veins.

On examination, he is sweaty and anxious. He has a low-grade fever and tachycardia of 130 beats per minute (bpm). His blood pressure (BP) is 120/80 mmHg. There is an extensive brownish red discoloration over the whole shin and significant associated swelling. There is also a crackly sensation when the swollen area is palpated, and a pungent discharge from an open site at the distal end of the affected area.

What is the most important treatment option?

Your answer was incorrect

A	Hyperbaric oxygen
B	Surgical debridement
C	Intravenous (IV) penicillin
D	Tetanus toxoid
E	IV immunoglobulin

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Surgical debridement

The answer is Surgical debridement (Option B).

Gas gangrene is a medical emergency. It is caused, in the vast majority of cases, by *Clostridium perfringens* infection, and the clinical presentation fits best with this diagnosis. Rapid onset of muscle necrosis, gas production and sepsis are the hallmarks of this disease. *C. perfringens* is an exotoxin-producing clostridial species (large, Gram-positive, spore-forming bacillus), which is normally found in soil and the gastrointestinal tract.

The most common clinical presentation is with post-traumatic gas gangrene, which occurs through direct inoculation of contaminated ischaemic wounds.

Spontaneous gas gangrene may be caused through the haematogenous spread of toxin-producing bacteria (often in patients who are immunocompromised or those with diabetes).

Immediate management involves resuscitation with oxygen and intravenous fluids to stabilise the patient. Surgical debridement is the definitive treatment.

E	IV immunoglobulin

IV immunoglobulins (Option E) is incorrect.

Immunoglobulin therapy is used in a wide variety of conditions such as immune-mediated thrombocytopenia and Guillain–Barré syndrome. Some evidence is available that supports its use in severe sepsis as an add-on treatment.

A	Hyperbaric oxygen

Hyperbaric oxygen (Option A) is incorrect.

This is used in multiple situations such as decompression sickness, air emboli and the healing of chronic wounds. It is also used against severe soft tissue infections, like gas gangrene and necrotising fasciitis, but its role is supportive.

C	Intravenous (IV) penicillin

Intravenous (IV) penicillin (Option C) is incorrect.

Certain antibiotics (including penicillin) alone are not effective enough treatment because they cannot penetrate the affected tissues sufficiently enough to be effective.

D	Tetanus toxoid

Tetanus toxoid (Option D) is incorrect.

Tetanus toxoid is a vaccine given in childhood for the prevention of tetanus. In immune patients, additional tetanus toxoid can be given in adulthood to booster immunity following high-risk injuries. In non-immunised individuals with high-risk injuries, tetanus antitoxin may also be administered.

A 24-year-old woman comes to the Dermatology Clinic for review. She has an intensely itchy rash with vesicles and blisters, which she says waxes and wanes from week to week. She has suffered from irritable bowel syndrome (IBS) symptoms in the past and her anti-Tissue Transglutaminase (anti-TTG) antibodies are positive.

Despite following a gluten-free diet and being prescribed dapsone, she is still suffering from the rash.

Which of the following is the most appropriate next step?

Your answer was correct

A	Oral azathioprine
B	Oral methotrexate
C	Oral prednisolone
D	Topical high-potency steroids
E	Oral sulfapyridine

Explanation

E	Oral sulfapyridine

Although following a gluten-free diet ±dapsone does improve the rash of dermatitis herpetiformis significantly in many patients, some still suffer resistant symptoms. In those adult patients, sulfapyridine may be given at a starting dose of 0.5 g three times per day, which may be increased to up to 6 g per day if necessary to control patient symptoms. Risks of therapy include agranulocytosis and hypersensitivity.

A	Oral azathioprine

Although some patients gain a response to azathioprine, it is less effective vs dapsone and sulfa-based compounds.

B	Oral methotrexate

Methotrexate isn't used for the treatment of dermatitis herpetiformis; in rare cases it is recognised to cause a coeliac disease-like syndrome with a dermatitis herpetiformis-type rash.

C	Oral prednisolone

Oral steroids should be avoided in the treatment of dermatitis herpetiformis if possible because of the benefit risk profile associated with systemic therapy.

D	Topical high-potency steroids

Topical high-potency steroids are an alternative to sulfapyridine, but given the often extensive nature of the rash, cumulative systemic absorption of steroids may be quite high.

38307

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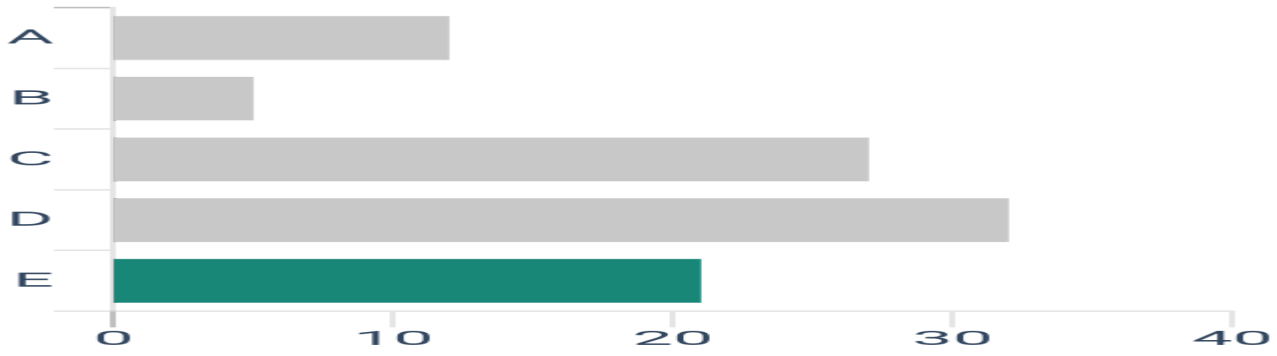

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Responses Correct:	5
Responses Incorrect:	29
Responses Total:	34

A 61-year-old woman with end-stage kidney disease presents to her General Practitioner (GP) with a six week history of progressive, painful tightening of the skin leading to disabling joint contractures. She denies having any difficulty swallowing, but admits to progressively worsening shortness of breath since the onset of her symptoms. She also complains of severe bone pain. She had a contrast-enhanced magnetic resonance imaging (MRI) scan two months earlier to rule out a slipped disc.

On examination, she has symmetrically distributed, indurated, woody plaques on the trunk and lower limbs. Her face, neck and nails are normal.

Which one of the following is the most likely diagnosis?

Your answer was correct

A	Systemic sclerosis
B	Plaque morphoea
C	Scleromyxoedema
D	Pre-tibia myxoedema
E	Nephrogenic systemic fibrosis

Explanation

E	Nephrogenic systemic fibrosis

Nephrogenic systemic fibrosis is a devastating cutaneous dermopathy seen in patients with end-stage kidney disease, and who have been exposed to gadolinium-based contrast agents seen in MRI. Metformin may also be a potential trigger, although the exact pathophysiological mechanism for the condition is unknown. Complications include pulmonary fibrosis, cardiomyopathy and pulmonary hypertension.

A	Systemic sclerosis

In systemic sclerosis a more prolonged course of symptoms would be expected, with other features such as Raynaud's, telangiectasia and nail changes not seen here.

B	Plaque morphoea

Morphea is usually asymptomatic, with asymmetrical areas of cutaneous fibrosis consistent with scleroderma developing over a period of many months, without the proximity, as here to gadolinium contrast material.

C	Scleromyxoedema

Scleromyxoedema is a rare progressive cutaneous mucinosis associated with progressive deposition of mucin within connective tissue, and often a paraproteinaemia.

D	Pre-tibia myxoedema

Pre-tibial myxoedema is confined to the shins and is associated with oedema and fibrosis, and with thyroid dysfunction.

38318

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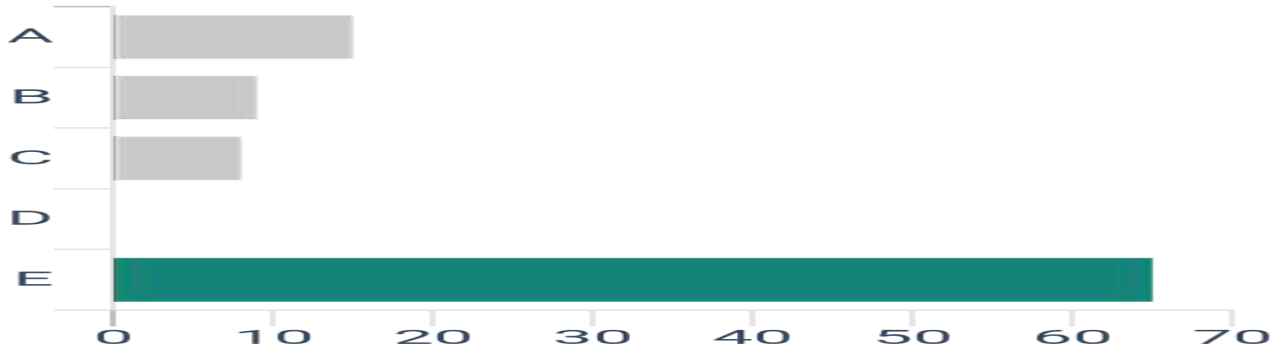

Session Progress

Responses Correct:	6
Responses Incorrect:	29
Responses Total:	35
Responses - % Correct:	17%

A 50-year-old woman came to the General Practitioner with complaints of pruritic skin lesions for the past three years. She was previously treated with terbinafine cream, without any resolution. She was on aceclofenac for chronic low back pain.

A skin biopsy is done and histopathological examination showed focal parakeratosis and superficial and deep perivascular mononuclear infiltrate, with characteristic cuffing in a coat sleeve fashion.

What is the most likely diagnosis in this patient?

Your answer was incorrect

A	Erythema annular centrifugum
B	Erythema migrans
C	Erythema marginatum
D	Erythema gyratum repens
E	Tinea corporis

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

A	Erythema annular centrifugum

The lesion characteristics, age, medication history (history of aceclofenac intake) and the histopathological findings indicate a diagnosis of erythema annular centrifugum. The lesion characteristics in this patient may be described as thick, red, scaly lesions on both arms, thighs and buttocks. The lesions show central clearing with erythematous raised edges. This is characteristic of the diagnosis of erythema annular centrifugum.

Image credit: CC BY 4.0, Victor Desmond Mandel, Barbara Ferrari, Marco Manfredini, Francesca Giusti and Giovanni Pellacani
https://commons.wikimedia.org/wiki/File:Erythema_annulare_centrifugum_on_arms_and_legs.jpg

C	Erythema marginatum

This patient has no features of rheumatic fever such as fever, painful and tender joints, chest pain, shortness of breath and fatigue. This makes the diagnosis of erythema marginatum unlikely.

B	Erythema migrans

Erythema migrans is seen in Lyme's disease. However, the absence of a history of fever, fatigue, arthralgia or lymphadenopathy makes this diagnosis unlikely.

D	Erythema gyratum repens

In erythema gyratum repens, the lesions tend to migrate at a rapid speed (1 cm/day). Since this patient has no such history, erythema gyratum repens would not be appropriate. In addition, underlying lung, breast and gastrointestinal cancers may be detected.

E	Tinea corporis

Plaques of tinea corporis tend to have more scaling and pruritus is more severe. In addition, the lesions did not respond to terbinafine make the diagnosis of tinea corporis unlikely.

72853

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Difficulty: Average

A 50-year-old man presents to his General Practitioner (GP) with bilateral itchy legs, which he has found increasingly difficult to manage over the past two to three months.

He has a background of kidney disease, secondary to type II diabetes mellitus, and is undergoing haemodialysis.

What is the most likely diagnosis?

Your answer was incorrect

A	Xerosis
B	Lipodermatosclerosis
C	Lichen simplex chronicus
D	Pre-tibial myxoedema
E	Scurvy

Explanation

A	Xerosis

'Xerosis' simply means dry skin and is a common complication of uraemia secondary to chronic kidney disease and dialysis. Uraemic patients commonly suffer from pruritus.

D	Pre-tibial myxoedema

Pre-tibial myxoedema, or Graves' dermopathy, is an infiltrative dermopathy resulting in a peau d'orange appearance and non-pitting oedema.

B	Lipodermatosclerosis

Lipodermatosclerosis is often associated with pain and causes tapering of the skin above the ankles, forming a constricting band resembling an inverted champagne bottle. There may be redness, induration and pigmentation.

C	Lichen simplex chronicus

Lichen simplex chronicus is caused by an itch-scratch cycle which starts after an underlying pruritic skin complaint such as eczema, irritant or allergic dermatitis or psoriasis. It looks like distinct patches of thick, brown leathery skin.

E	Scurvy

Scurvy results in purpura or ecchymoses (bruises) and corkscrew hairs rather than the picture of dry scaling skin seen here.

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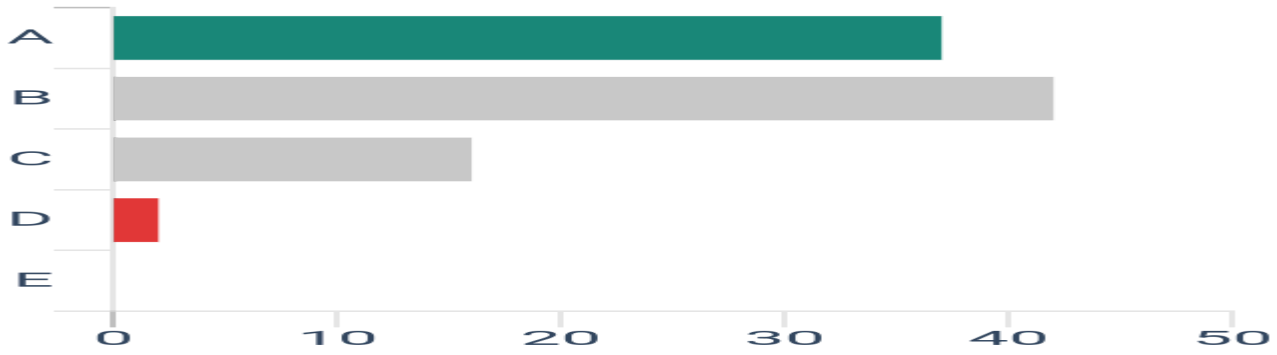
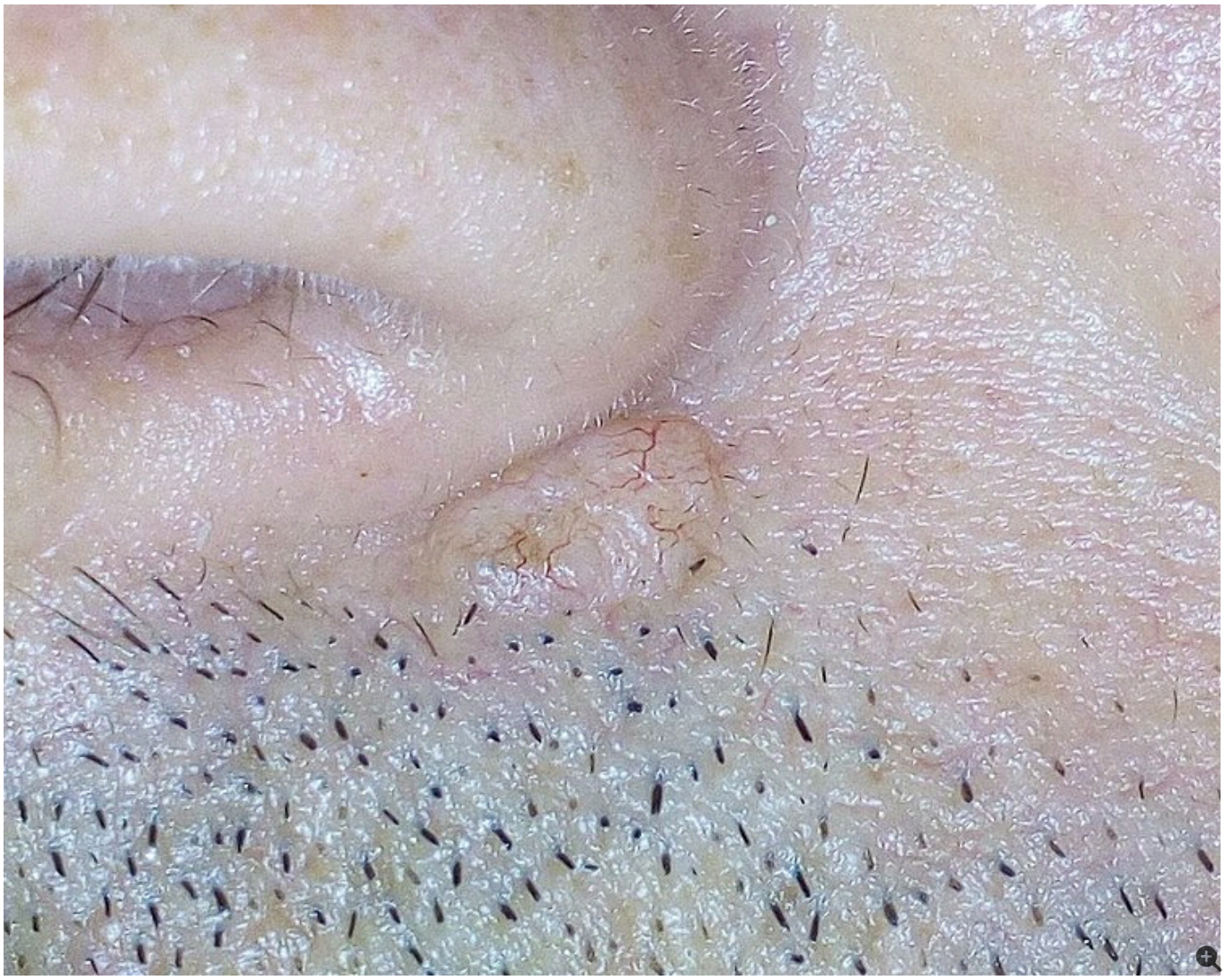


A 47-year-old man is referred to the Dermatology Clinic with a one year history of a lesion developing on the left upper lip, which has steadily enlarged. There is no history of itching or bleeding. He was noted to be a keen user of sun beds.

The lesion is shown below.



What is the most likely diagnosis?

Your answer was incorrect

A	Nodular melanoma
B	Basal cell carcinoma (BCC)

C	Squamous cell carcinoma (SCC)
D	Atypical fibroxanthoma (AFX)
E	Pyogenic granuloma

Explanation

B	Basal cell carcinoma (BCC)

The image shows a nodular lesion below the left nasolabial fold with telangectasia. The most likely diagnosis is that of a BCC. This is the most common non-melanoma skin malignancy. BCCs (or rodent ulcers) most commonly occur in middle-aged or elderly fair-skinned individuals with significant sun exposure. Most occur on the face but can also occur on the limbs and trunk. BCCs usually start as a small, translucent papule with telangiectasia over the surface. They gradually increase in size, developing into firm, tethered nodules, with a centre that may ulcerate and crust. The most common treatment is with surgical excision or radiotherapy.

Image source: https://commons.wikimedia.org/wiki/File:Basal-cell_Carcinoma.jpg (https://commons.wikimedia.org/wiki/File:Basal-cell_Carcinoma.jpg) - This file is licensed under the Creative Commons (https://en.wikipedia.org/wiki/en:Creative_Commons) Attribution-Share Alike 4.0 International (https://creativecommons.org/licenses/by-sa/4.0/deed.en) license.

C	Squamous cell carcinoma (SCC)

Cutaneous SCC is the second most common types of non-melanoma skin cancer. They present as enlarging scaly or crusted lumps which often arise within pre-existing actinic keratoses or areas of Bowen's disease.

A	Nodular melanoma

A malignant melanoma is a tumour of the melanocytes. Two-thirds arise from normal skin, and one-third from pre-existing moles. Even though commonly encountered, melanomas are more rare than non-melanoma skin cancers. It is important to diagnose and treat melanomas while they are thin, so that removal may result in favourable prognostic outcomes.

D	Atypical fibroxanthoma (AFX)

An AFX is an uncommon type of skin cancer, accounting for < 0.2% of all skin cancers. It occurs mainly on the head or neck of older people with significant sun exposure. Typically, AFX is a red, juicy, dome-shaped nodule that may be bleeding, ulcerated or crusted.

E	Pyogenic granuloma

Pyogenic granuloma is a benign growth of blood vessels. It presents as a growing fleshy lump, which may bleed easily. It is often the product of physical trauma, infection or hormonal changes such as pregnancy. 6318

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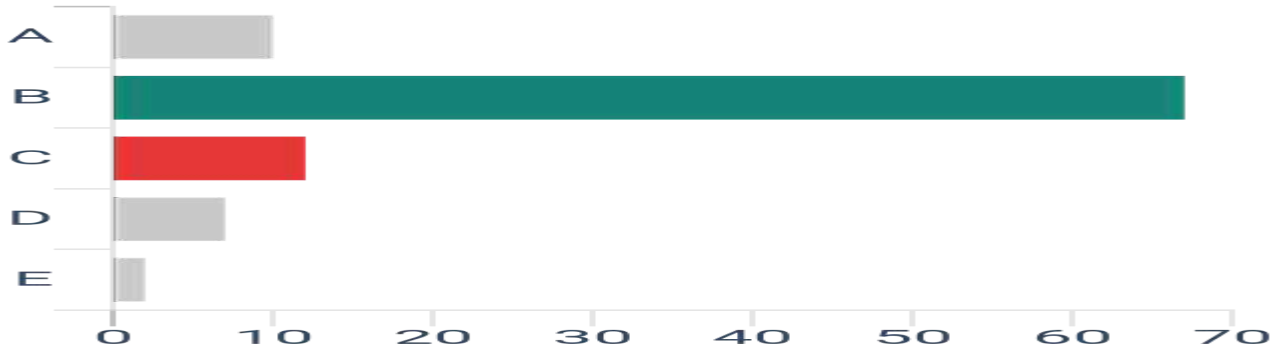

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Responses Incorrect:	32
Responses Total:	38
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Basal Cell Carcinoma

A 24-year-old woman is reviewed in the Outpatient Clinic.

A picture of the patient's finger nails is shown below:

Which of the following conditions are they most likely to suffer from?

Your answer was incorrect

A	Psoriasis
B	Rheumatoid arthritis
C	Iron deficiency anaemia
D	Idiopathic pulmonary fibrosis
E	Subacute bacterial endocarditis

Explanation

A	Psoriasis

The photograph shows nail pitting, which occurs in psoriasis, eczema and alopecia areata. It may pre-date the development of the typical psoriatic rash in some instances.

E	Subacute bacterial endocarditis

This is associated with clubbing and / or splinter haemorrhages rather than pitting of the nails, which is demonstrated in the picture.

B	Rheumatoid arthritis

Rheumatoid arthritis may be associated with nail ridging or longitudinal splitting, not with the pitting seen here.

C	Iron deficiency anaemia

Iron deficiency anaemia is associated with koilonychias or spoon shaped nails.

D	Idiopathic pulmonary fibrosis

Idiopathic pulmonary fibrosis is associated with nail clubbing rather than nail pitting.

39074

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Difficulty: Easy

Peer Responses %

A 40-year-old man presents to the Dermatology Clinic with an 8-week history of a new rash affecting his trunk, groin and armpits. There is no history of pain, itch or bleeding, but he is concerned that the rash appears unsightly. He has a past medical history of HIV, for which he has been taking antiretroviral therapy, although he has poor compliance with treatment.

His rash is examined, as shown below:

Dr. Jamil Alrajhi

Apr 6, 2025

What is the most likely diagnosis?

Your answer was correct

A	Herpes zoster
B	Lichen planus
C	Miliaria
D	Molluscum contagiosum

E	Verrucae vulgaris

Explanation

D	Molluscum contagiosum

This patient has a likely diagnosis of molluscum contagiosum, a viral rash caused by a poxvirus. It is commonly seen in childhood or the immunocompromised (eg uncontrolled HIV), and presents as clusters of round, waxy papules with an umbilicated centre, as seen in this photo. Each papule contains a thick, creamy material. The rash often appears in warm and moist places, including the armpit, genitalia and behind the knees.

Molluscum contagiosum usually resolves on its own and does not normally cause any symptoms other than the spots. Routine treatment is therefore not recommended, particularly in children. For immunocompromised patients or in cases when the spots are particularly unsightly and affect the quality of life, treatment can be offered, including topical agents or cryotherapy, to remove spots.

A	Herpes zoster

Varicella-zoster virus causes herpes zoster (shingles). This is a painful vesicular rash with papules containing a clear vesicular flud. It mostly has a dermatomal distribution, although in immunocompromised individuals, the rash may be bilateral or diffuse. In this case, the patient has a non-painful, umbilicated rash. Furthermore, the papules contain a thicker, white material supporting a diagnosis of molluscum contagiosum rather than herpes zoster.

B	Lichen planus

Lichen planus is typically an itchy rash that appears as flat-topped plaques. There are often multiple round, well-circumscribed, raised purple lesions. However, the colour of the rash is dependent on skin tone. On closer inspection, subtle white markings may be visualised on top of the lesions, known as Wickham striae. However, the appearance of the rash in this question is multiple, round and waxy papules that have a pale pink colour. This is more in keeping with molluscum contagiosum rather than with lichen planus.

C	Miliaria

Miliaria is a condition secondary to occlusion of the sweat ducts, particularly over the cheeks, from excessive sweating in hot environments. Lesions associated with miliaria tend to be smaller and not as pearly as those of molluscum contagiosum.

E	Verrucae vulgaris

Verrucae vulgaris is the term given to common warts caused by human papillomavirus infection. They are most common in children, young adults and immunocompromised patients. They can appear anywhere on the body but are frequently found on the soles of the feet and the genitalia or in areas prone to trauma (eg elbows). These warts typically present as round, hyperkeratotic skin papules with a white or brown surface. They do not typically have a waxy appearance with an umbilicated centre.

73948

Rate this question:

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Difficulty: Average

Peer Responses %

Session Progress

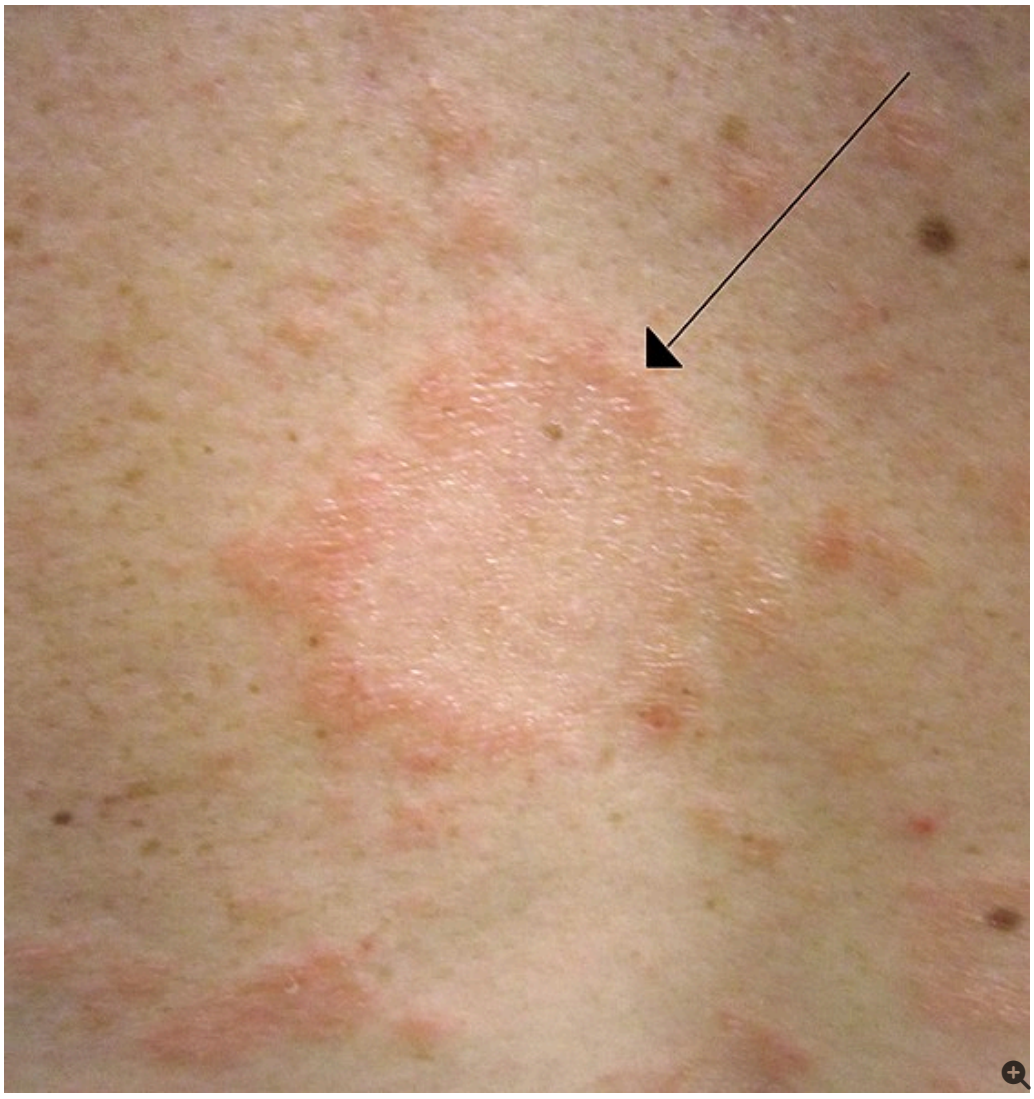
Responses Correct:	7
Responses Incorrect:	33
Responses Total:	40
Responses - % Correct:	18%

Molluscum Contagiosum

Expanded explanations

A 19-year-old woman presents to the Emergency Department for review. She complains of a generalised, itchy rash, which has spread all over her neck, trunk, the top of her arms and the tops of her legs. She explains that the rash began in one area of affected skin; this was salmon pink in colour and surrounded by scaling skin, about 4–5 cm in diameter over her lower chest.

On examination, there are a number of small lesions over her trunk, which are 1–2 cm in diameter. These are shown below:



She is apyrexial. Her routine blood tests are unremarkable.

What is the most likely diagnosis?

Your answer was incorrect

A	Guttate psoriasis

B	Lichen planus
C	Pityriasis lichenoides
D	Pityriasis rosea
E	Tinea corporis

Explanation

D	Pityriasis rosea

Pityriasis rosea occurs with increased frequency in spring and autumn, and may be related to infection with human herpesvirus 6 or 7, although no definitive link has yet been proven. The history of a ‘herald’ patch, followed by a generalised rash, supports a diagnosis of pityriasis rosea. No treatment is required, and lesions typically heal without scarring over two to ten weeks.

Image Source: https://commons.wikimedia.org/wiki/File:Heraldpatch2.jpg James Heilman,MD, CC BY-SA 3.0 , via Wikimedia Commons

B	Lichen planus

The typical lesion of lichen planus is an intensely itchy, red or violet, shiny, flat-topped 2- to 5-mm papule with white streaks, usually seen on flexural surfaces.

A	Guttate psoriasis

Guttate psoriasis is characterised by multiple small erythematous papules with scaling. It is often seen post-streptococcal infection and is not associated with an initial herald patch.

C	Pityriasis lichenoides

Pityriasis lichenoides is characterised by multiple papules and plaques, which can appear over many years, compared to the shorter time course seen here associated with pityriasis rosea. It also does not present with an initial herald patch.

E	Tinea corporis

Tinea corporis is also known as ringworm. It is a dermatophyte infection classically affecting the face, trunk and limbs. It causes pink to red annular patches and plaques with raised scaly borders.

A 55-year-old man of Chinese ethnic origin presents to the Dermatology Clinic with a discoloration on his back which has been present for three years. It is intensely itchy. He has no significant past medical history, apart from mild hypertension.

What is the most likely diagnosis?

Your answer was incorrect

A	Malignant melanoma
B	Lichen amyloidosis
C	Lichen sclerosis

D	Lichen simplex chronicus
E	Erythema ab igne

Explanation

B	Lichen amyloidosis

Lichen amyloidosis is a primary, localised cutaneous amyloidosis (amyloid deposition in the skin). It results in intensely itchy shiny or hyperkeratotic, pigmented macules and occurs most commonly in South East Asia. It appears that itching drives further amyloid deposition, and treatments are therefore directed at reducing the sensation of itching - for example, with the use of antihistamines and intra-lesional/topical corticosteroids.

Image source: https://amyloidosis.org.uk/forum/index.php?topic=562.0

C	Lichen sclerosis

Lichen sclerosis results in whitening, thinning and atrophy of the skin, rather than the thickening seen here.

A	Malignant melanoma

Melanoma is a discrete lesion, rather than a diffuse pigmentation as seen here. A primary melanoma would also be less likely to occur on the lower back as it is less likely to be a sun-exposed area.

D	Lichen simplex chronicus

Lichen simplex chronicus (neurodermatitis) commonly occurs in areas where the patient is easily able to scratch (such as the shins) and thereby perpetuate the itch/scratch cycle.

E	Erythema ab igne

Erythema ab igne would require a history of back pain/hot water bottle use and is a reticulate dermatosis.

A 22-year-old man attends his General Practice surgery with a rash on his right lower leg. It is confined to the right shin and is intensely itchy.

He had no skin conditions prior to this rash, which started after a period of financial stress caused by losing money through gambling.

What is the most likely cause of the rash?

Your answer was incorrect

A	Lichen striatus
B	Lichen simplex et chronicus
C	Lichen planus

D	Lichen sclerosus et atrophicans
E	Lichen aureus

Explanation

B	Lichen simplex et chronicus

Lichen simplex is a form of neurodermatitis, caused by a vicious ‘itch-scratch’ cycle where scratching causes feedback from the brain to trigger the feeling of itchiness. It is triggered and exacerbated by stress. Interfering with the itch-scratch cycle using agents such as anti-histamines can lead to resolution of the condition.

C	Lichen planus

Lichen planus appears as small purple papules on the skin and may also be seen as white lacy patches in the mouth.

A	Lichen striatus

This is associated with scaly linear bands.

D	Lichen sclerosus et atrophicans

This gives a white, shiny appearance to the skin rather than the papules seen here.

E	Lichen aureus

Lichen aureus is a pigmented dermatosis which is associated with a golden discoloration to the area of affected skin.

39082

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Previous Question

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Feedback

End Session

A 47-year-old man presents to his General Practitioner (GP) with a lesion on his fourth finger, which has been present for three years. It has grown slowly, is not painful, and occasionally discharges a jelly-like, sticky fluid, sometimes tinged with blood.

What is the most likely diagnosis?

Your answer was incorrect

A	Squamous cell carcinoma
B	Myxoid cyst
C	Baker's cyst
D	Merkel cell carcinoma
E	Acral melanoma

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Myxoid cyst

Digital mucous (myxoid) cysts arise from degeneration of the connective tissue. They may connect with the joint at the end of the finger. They may be found at the base of the nail, or within a centimetre of this. They can cause a nail groove (but not in this case).

D	Merkel cell carcinoma

Merkel cell carcinomas are rare, aggressive skin cancers often appearing on the face, head or neck, as flesh-coloured or blue/red nodules.

A	Squamous cell carcinoma

Over the course of 3 years, growth of squamous cell carcinoma would be expected, with increasing size of the lesion accompanied by central necrosis.

C	Baker's cyst

Baker’s cysts occur in the popliteal fossa and are related to osteoarthritic degeneration of the knee.

E	Acral melanoma

Acral melanoma occurs on non-hair-bearing surfaces of the body such as the palms, soles, under nails and the oral mucosa. It is the most common melanoma type diagnosed in Asian and sub-Saharan ethnic groups.

38519

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Previous Question

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Difficulty: Easy

You are asked to review a 24-year-old woman in the Dermatology Clinic with a history of epilepsy and learning difficulties. She takes a range of antiepileptics drugs (AED) and mood stabilisers.

On examination, she has a rash on her lower limbs that consists of a number of erythematous indurated papules and nodules. Biopsy of the lesions reveals extensive T-lymphocyte infiltration.

Which of the following is the most likely diagnosis in this patient?

Your answer was incorrect

A	Drug-induced pseudolymphoma syndrome
B	Cutaneous T-cell lymphoma
C	Drug-induced lupus
D	Lymphomatoid papulosis
E	Dermatitis herpetiformis

Explanation

A	Drug-induced pseudolymphoma syndrome

Causes include AED (phenytoin, carbamazepine, lamotrigine and a number of other agents). A number of antibiotics, antiarrhythmics, antidepressants and antihistamines have also been implicated. Treatment involves discontinuation of all possible causative drugs. It is necessary to monitor resolution of symptoms as malignant transformation of skin lesions has been reported.

D	Lymphomatoid papulosis

In the event that we were not given the history of mood stabiliser and anti-epileptic use, lymphomatoid papulosis would be considered the main differential diagnosis.

B	Cutaneous T-cell lymphoma

Cutaneous T-cell lymphoma is a disease of the elderly and presents with chronic itching and widespread erythema.

C	Drug-induced lupus

At least initially, drug-induced lupus would be expected to lead to an erythematous rash over sun-exposed areas rather than the generalised picture seen here.

E	Dermatitis herpetiformis

Dermatitis herpetiformis is more likely to present with a blistering skin rash associated with neutrophil, rather than lymphocyte, infiltration.

9277

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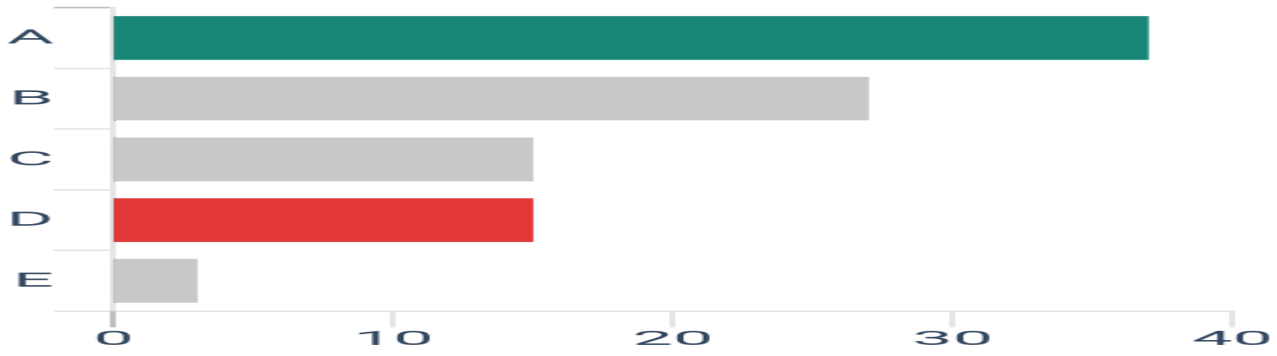
End Session

Difficulty: Difficult

Peer Responses %



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Responses Correct:	7
Responses Incorrect:	38
Responses Total:	45

A 25-year-old man attends the Emergency Department (ED) with a sudden onset rash. He claims he has been ‘run down’ recently with a sore mouth and throat and a cough. He is a smoker of 15 cigarettes/day.

On examination, he has several painful erosions on the inside of his lips, an engorged, erythematous throat and a diffuse wheeze. On his palms and forearms, he has several oedematous papules, some of which have small vesicles in their centre, forming a target lesion.

Which of the following is the most likely trigger for his condition?

Your answer was incorrect

A	EBV
B	HSV 1
C	Parvovirus B19
D	Influenza
E	Varicella-zoster virus

Explanation

B	HSV 1

The targetoid rash described here is classic for erythema multiforme minor. The most common cause is HSV 1. EM minor is considered to be a type 4 hypersensitivity reaction to a viral or bacterial trigger.
A previous history of EM and male sex are also considered as risk factors. Other common causes are mycoplasma pneumonia, pneumococci, tuberculosis and *Mycobacterium avium* complex. EM minor is acute and self-limiting, but has a tendency to recur. It should be distinguished from EM major, or Stevens-Johnson syndrome, which is most commonly due to a drug cause and is more rapidly progressive and severe.

E	Varicella-zoster virus

Chicken pox is associated with a widespread vesicular rash, and shingles with a rash confined to a particular dermatome, neither of which fits with the picture seen here.

A	EBV

EBV is associated with pharyngitis and severe tonsillitis rather than the picture seen here.

C	Parvovirus B19

Parvovirus B19 is associated with coryzal symptoms and an erythematous facial rash, which leads to its description as ‘slapped cheek’ disease.

D	Influenza

Influenza may be associated with upper respiratory tract symptoms but isn’t associated with the vesicles and erosions seen here.

38301

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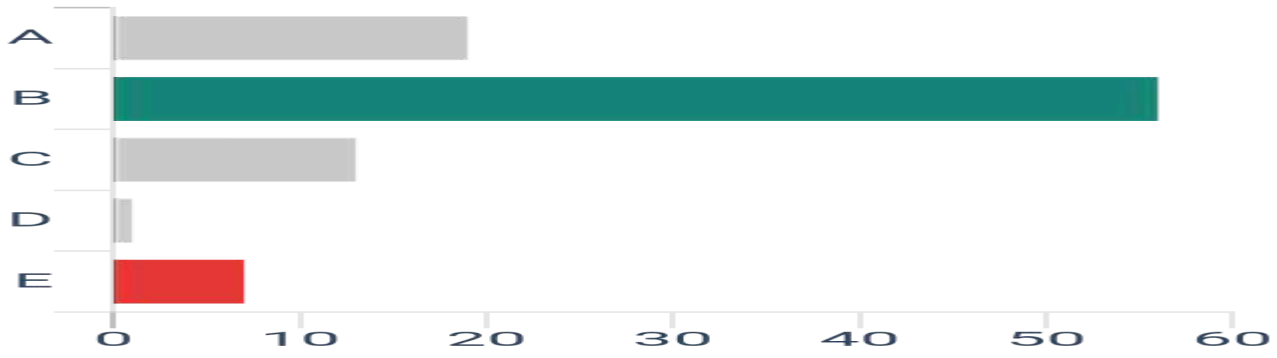
Difficulty: Average

Peer Responses %



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Responses Correct: 7

Responses Incorrect: 39

A 39-year-old woman, who has a history of sarcoid and is currently managed with a tapering dose of steroids, visits her General Practitioner (GP) for advice, as she is worried about going to Spain on holiday because she feels that the spots at the sides of her nose have got more prominent in the past few weeks and may significantly worsen in the sun. The picture is shown below.

Which of the following is the most appropriate advice / intervention?

Your answer was incorrect

A	Add azathioprine
B	Increase the dose of systemic corticosteroids again
C	Local 5-FU cream
D	Sun block
E	Thalidomide

Explanation

B	Increase the dose of systemic corticosteroids again

The papules around the edges of both nostrils are consistent with lupus pernio, a recognised cutaneous manifestation of sarcoid which is associated with more severe disease. It responds poorly to topical agents, and therefore an increase in systemic therapy is the treatment of choice.

D	Sun block

Although sun exposure worsens the rash of lupus pernio, avoidance of sun alone won't resolve the condition versus an increase in steroid dose.

A	Add azathioprine

Azathioprine is the default second-line agent in the event that the acute increase in corticosteroid dose fails to control symptoms.

C	Local 5-FU cream

Topical agents such as 5-FU have little effect on symptoms of lupus pernio.

E	Thalidomide

Thalidomide is used as a third-line agent for patients who fail to respond to corticosteroids, and a conventional second-line agent such as azathioprine.

34149

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Previous Question

Tag Question

Feedback

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Difficulty: Difficult

A 56-year-old woman presents to the Dermatology Clinic with a spot on her right leg which, over the last nine months, has become erythematous and has broken down to form a painful, rapidly spreading ulcer. She currently takes diclofenac and lansoprazole for arthritis.

She had a similar episode two years ago and was given a reducing course of oral prednisolone, which completely cleared the lesion. She was seen by her General Practitioner (GP) who prescribed oral antibiotics, and after a week there has been no improvement.

On examination, her temperature is 37.1 °C. The ulcer on her right lower limb shown below. There are no other skin changes seen. There is no neurological deficit in the lower limbs. Pedal pulses are present and bounding in nature.

Which is the most likely diagnosis?

Your answer was incorrect

A	Arterial ulcer
B	Vasculitic ulcer
C	Venous ulcer
D	Pyogenic granuloma
E	Pyoderma gangrenosum

Explanation

E	Pyoderma gangrenosum

The image shows a large nectroic ulcer with an undermined edge in keeping with pyoderma gangrenosum. This occurs when an inflamed nodule or pustule breaks down centrally to form an expanding ulcer with a characteristic undermined bluish edge. The condition is not bacterial in origin, but its pathogenesis (probably immunological) is not fully understood. It can occur in the absence of an underlying disease but tends to be associated with:

- ulcerative colitis
- conditions causing polyarthritis, eg rheumatoid arthritis
- Crohn's disease
- monoclonal gammopathies
- leukaemia.

Lesions can be single or multiple. The condition tends to respond to systemic steroids, but not to antibiotics, and heals, leaving scars.

Image source: https://dermnetnz.org/topics/pyoderma-gangrenosum (https://dermnetnz.org/topics/pyoderma-gangrenosum) - Attribution-NonCommercial-NoDerivs 3.0 New Zealand (CC BY-NC-ND 3.0 NZ (https://creativecommons.org/licenses/by-nc-nd/3.0/nz/))

B	Vasculitic ulcer

Vasculitic ulcers are usually punched out and develop in areas of purpura.

A	Arterial ulcer

Arterial ulcers are punched out and may be painful. They occur in areas of poor arterial circulation and are therefore associated with cold, atrophic limbs and a lack of peripheral pulses.

C	Venous ulcer

Venous ulcers are usually chronic and have sloped edges. They occur in areas of venous hypertension, ie lipodermatosclerosis, venous eczema, haemosiderin deposition and atrophie blanche.

D	Pyogenic granuloma

Despite the similar sounding name, this lesion is of different pathology, compared to pyoderma gangrenosum. Pyogenic granuloma is a benign growth of blood vessels. It presents as a growing fleshy lump, which may bleed easily. It is often the product of physical trauma, infection or hormonal changes (such as pregnancy).

Rate this question:

Next Question

A 45-year-old woman presents to the Emergency Department (ED) with sudden onset tender nodules on her legs (see photo), fever, joint pains, and shortness of breath.

A chest X-ray (CXR) in the ED reveals the presence of bilateral hilar lymphadenopathy.

What is a skin biopsy from one of the nodules most likely to show?

Your answer was incorrect

Dr. Jamil Alrajhi
Apr 6, 2025

A	Prominence of mast cells
B	Nests of melanocytes

C	Neutrophilic panniculitis
D	Spongiosis and oedema
E	Vasculitis

Explanation

C	Neutrophilic panniculitis

The lesions represent erythema nodosum. A typical skin biopsy from one of the lesions would show evidence of panniculitis, i.e. the presence of neutrophils and inflammation around lobules of fat in the subcutaneous tissue.

B	Nests of melanocytes

Nests of melanocytes are a common histological finding of melanocytic naevi.

A	Prominence of mast cells

Mast cells are a type of leucocytes that contain granules of histamine and have an important role in allergic reactions. Aggregates of mast cells in the skin are seen in urticaria pigmentosa.

D	Spongiosis and oedema

Spongiosis and oedema are typical histological findings of eczema.

E	Vasculitis

Vasculitis occurs due to inflammation surrounding the blood vessels. Cutaneous vasculitis presents clinically with purpura and ulceration.

40103

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Previous Question

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Feedback

End Session

A 36-year-old woman presents to her General Practitioner (GP) with a receding frontal hair line and loss of eyebrows. Closer inspection of the hair follicles reveals hyperkeratosis within the hair follicles (shown) and perifollicular inflammation.

The black line on the image below denotes the original hair line.

She also has white, lacy streaks in her mouth and painless white streaks on her vulva.

What is the most likely diagnosis?

Your answer was incorrect

A	Lichen planopilaris
B	Discoid lupus erythematosus
C	Alopecia areata
D	Hypothyroidism
E	Lichen sclerosis

Explanation

A	Lichen planopilaris

LPP is a variant of lichen planus. It causes inflammation around hair follicles with destruction of hair follicles and eventually a scarring alopecia. There is central horn plugging in the ostium of the follicle. Wickham's striae occur in lichen planus as do vulval lesions.

E	Lichen sclerosis

This most commonly affects the vulva and is associated with pale skin changes and inflammation, which may eventually lead to fibrosis.

B	Discoid lupus erythematosus

This is associated with an erythematous rash which is worse on sun exposure and potential scarring alopecia.

C	Alopecia areata

This is associated with patches of non-scarring hair loss.

D	Hypothyroidism

This is associated with brittle hair and non-scarring hair loss.

39089

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Previous Question

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Feedback

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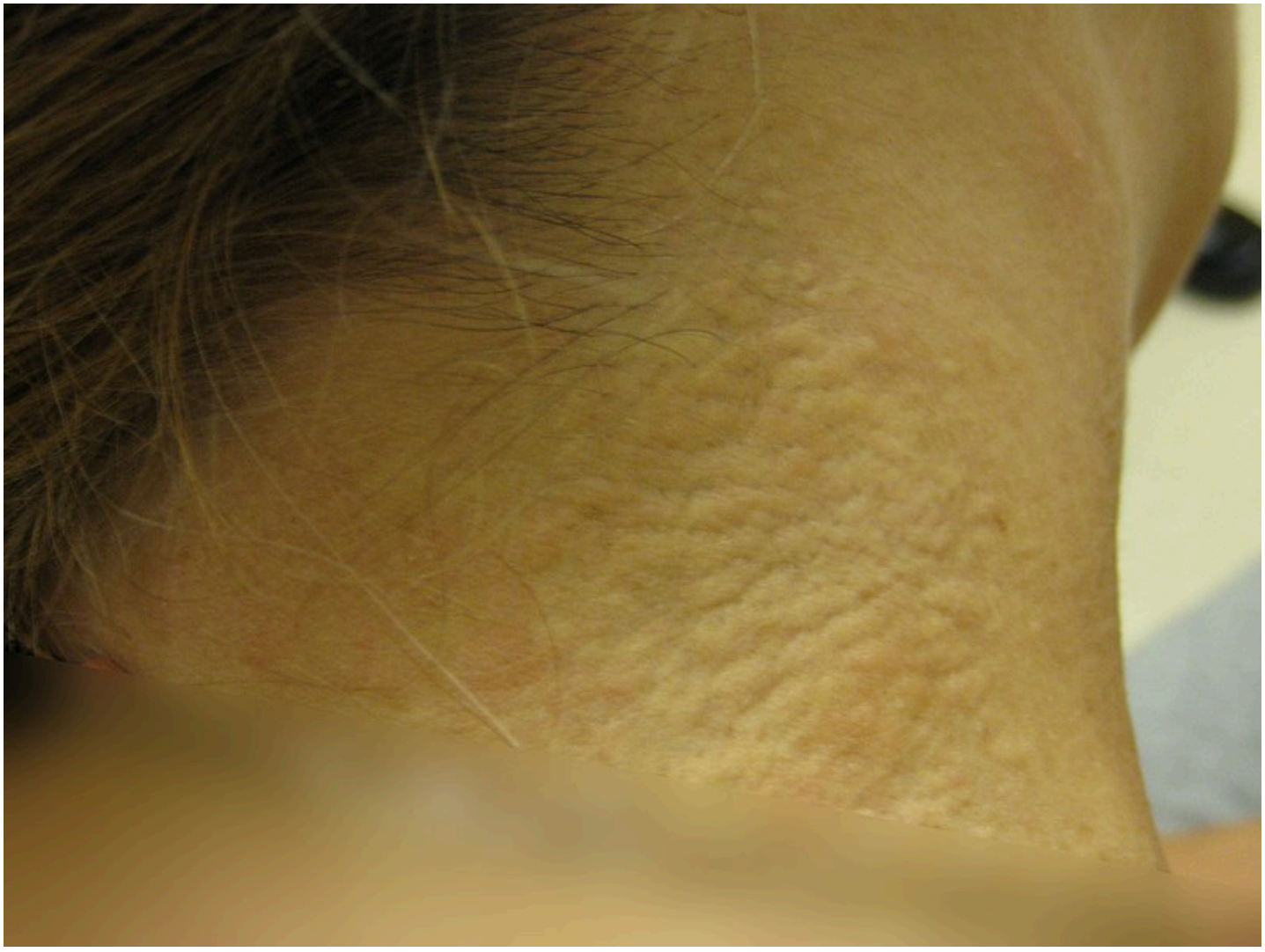
Difficulty: Average

An 18-year-old man who has limited history engaging with medical services presents to the Dermatology Clinic for review. He has a number of yellowish papules in the axilla and groin and over the lateral part of the neck. He has been told by a friend that it looks like 'chicken skin', an image of the posterior lateral neck isshown below



He tells you he feels chronically tired, and a haemoglobin checked by his General Practitioner (GP) is 99 g/l (normal range 135–175 g/l) with a microcytic picture.

Ophthalmological examination shows angioid streaks and maculopathy. A skin biopsy confirmed the presence of calcification of dermal elastic fibres.

Which of the following diagnoses is most likely?

Your answer was incorrect

A	Pseudoxanthoma elasticum
B	Marfan syndrome
C	Ehlers-Danlos syndrome
D	Familial hypercholesterolaemia
E	Homocystinuria

Explanation

A	Pseudoxanthoma elasticum

Pseudoxanthoma elasticum (PXE) is a rare, inherited disorder in which elastic fibres become fragmented and calcified.

Patients with the following three diagnostic criteria definitely have PXE:

- Characteristic skin signs (yellow papules in flexural areas)
- Characteristic skin histology fragmentation, clumping and calcification of dermal elastic fibres
- Ophthalmic features (angioid streaks, mottled peau d'orange retinal pigmentation, maculopathy).

Image source: https://commons.wikimedia.org/wiki/File:Pseudoxanthoma_elasticum_1.JPG (https://commons.wikimedia.org/wiki/File:Pseudoxanthoma_elasticum_1.JPG)

B	Marfan syndrome

Marfan syndrome skin changes include striae, particularly affecting the thoracolumbar and sacral region, rather than the plucked skin appearance seen here. It is also associated with the Marfan body habitus and recurrent joint and lens dislocation.

C	Ehlers-Danlos syndrome

Characteristic features of Ehlers-Danlos include bruising, bleeding from the gastrointestinal tract, dissecting thoracic aortic aneurysm, widening of scars related to surgery and injury, laxity of joints, hernias and skin hyperelasticity.

D	Familial hypercholesterolaemia

Familial hypercholesterolaemia is associated with corneal arcus and tendon xanthomata, rather than the skin appearance seen here.

E	Homocystinuria

Homocystinuria is associated with similar features to Marfan, including lens dislocation and joint dislocation, although parents often suffer from a degree of learning difficulty.

38317

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Difficulty: Easy

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Responses Correct:	7
Responses Incorrect:	44
Responses Total:	51
Responses - % Correct:	14%

Pseudoxanthoma Elasticum

A 78-year-old war man is admitted to hospital in order to undergo plastic surgery for a 3 cm nodular basal cell carcinoma (BCC) on the left side of his face.

Past medical history of note includes hypertension, which is managed with amlodipine 10 mg daily and atrial fibrillation (AF) without demonstrable valvular disease, although he is warfarinised. He omits his warfarin for 5 days before surgery, he is given low-molecular weight heparin (LMWH) and his international normalised ratio (INR) is 1.3.

Which of the following is the most appropriate way to manage the BCC?

Your answer was incorrect

A	Electrodessication and curettage
B	Excision
C	Topical 5-FU
D	Radiation therapy
E	Cryotherapy

Explanation

B	Excision

Excision is the most appropriate treatment for nodular, infiltrative and morpheoic BCCs. Cryotherapy, curettage and other treatment methods are second to excision for sensitive areas such as the face. Excision of BCCs is a low-risk procedure when the warfarin has been stopped some 5 days prior to surgery and he is now managed with low-molecular weight heparin. Wafarin may be recommenced at the surgeon's discretion, a few days after surgery.

E	Cryotherapy

Cryosurgery is cost effective and requires minimal anaesthesia, but the procedure is contraindicated in patients with lesions with features associated with a high risk for recurrence, those who are concerned about a poor cosmetic outcome (as it can lead to permanent hypopigmentation and scarring), and those with a physiologic intolerance to cold. Furthermore, recurrence rates for primary BCCs range from 4-17%.

A	Electrodessication and curettage

This is a fast and easily performed treatment for BCCs, but the procedure does not allow histological confirmation, is highly operator dependent and requires considerable experience to achieve low recurrence rates. This is most appropriate for low-risk superficial or nodular BCCs on the trunk or extremities.

Reference: Blixt E, Nelsen D, Stratman E. Recurrence rates of aggressive histologic types of basal cell carcinoma after treatment with electrodesiccation and curettage alone. *Dermatologic Surgery*. 2013 May 1;39(5):719-725.

C	Topical 5-FU

This is used to treat small superficial BCCs rather than nodular ones. 5-FU interferes with DNA synthesis by inhibiting thymidylate synthetase. Long-term favourable cosmetic results are one of the main advantages of topical 5-FU. Topical 5-FU is usually used twice daily and is applied for up to 12 weeks.

Reference: Gross K, Kircik L, Kricorian G. 5% 5-Fluorouracil cream for the treatment of small superficial basal cell carcinoma: efficacy, tolerability, cosmetic outcome, and patient satisfaction. *Dermatologic Surgery*. 2007 Apr 1;33(4):433-440.

D	Radiation therapy

Radiation therapy can be used to treat BCC with incomplete excision, recurrent BCC, nodular BCC of the head and neck (<2 cm) and BCC with invasion of bone/cartilage. It is used if surgery is not suitable, but this gentleman's warfarin has been stopped and his INR is 1.3 (and he has omitted warfarin for 5 days).

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Easy

An 18-year-old fit and healthy woman presents to the Dermatology Clinic for a follow-up appointment. She has been trialling topical adapalene and benzoyl peroxide with oral doxycycline for severe acne vulgaris for 12 weeks. On review, it appears that her acne has not improved and is at risk of significant scarring. There is no other past medical history of note. Her body mass index is 22 kg/m^2.

The decision is made to escalate her treatment to include oral isotretinoin.

What is the most immediate action to take before escalating this patient's treatment?

Your answer was incorrect

A	Cessation of tetracyclines
B	Low-cholesterol diet
C	Monitoring of renal function
D	Use of sunscreen
E	Weight control

Explanation

A	Cessation of tetracyclines

Isotretinoin increases the risk of intracranial hypertension which causes severe headaches and blurred vision. Tetracyclines are other risk factors for the disease and therefore, the two drugs should not be prescribed together.

E	Weight control

Isotretinoin may precipitate benign intracranial hypertension in some patients who use it. This patient is fit and well, with a normal body weight. Measures to control weight gain are therefore unlikely to be needed.

B	Low-cholesterol diet

Although treatment with isotretinoin may precipitate elevations in cholesterol and triglyceride levels, no dietary intervention is required. Baseline testing of the lipid profile is recommended.

C	Monitoring of renal function

Renal function does not affect the metabolism of isotretinoin and no dose adjustment is recommended. Liver function testing, in contrast, is recommended for patients commencing isotretinoin therapy.

D	Use of sunscreen

Intense sun exposure can lead to hypersensitivity rashes in patients taking isotretinoin, and sunscreen is advised. However, a more immediate action to take is to stop taking tetracycline antibiotics due to the risk of intracranial hypertension.

72948

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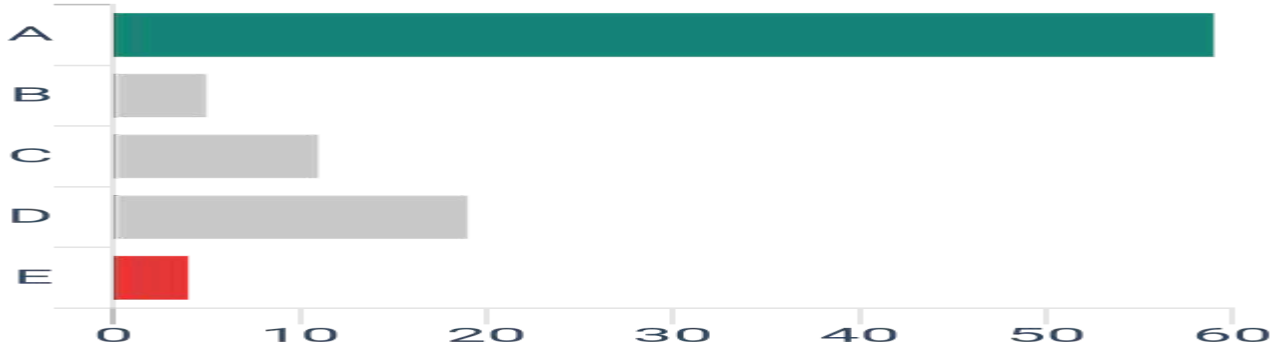

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A 23-year-old hiker has returned from a recent holiday in Austria with a spreading rash. He also complains of aching knee joints. He suffered at least two tick bites where he removed the parasites himself.

Given the likely diagnosis, what would be the most appropriate treatment?

Your answer was correct

A	Doxycycline 100 mg twice daily (bd)
B	Ciprofloxacin 500 mg once daily (od)
C	Prednisolone 50 mg od
D	Topical hydrocortisone 1%
E	No treatment

Explanation

A	Doxycycline 100 mg twice daily (bd)

The diagnosis is Lyme disease as a result of infection by *Borrelia burgdorferi*, which is transmitted to humans by tick bites. The associated diagnostic rash is erythema chronicum migrans. This appears at the site of the tick bite in about 90% of patients, on average around 9 days after the inoculation. There is an enlarging ring formation, which may clear in the centre, leaving a target-like morphology. Dissemination may lead to arthritis (57%), neural involvement (18%) and heart disease, in particular conduction defects (10%). Most non-disseminated disease responds well to oral antibiotics.

B	Ciprofloxacin 500 mg once daily (od)

Ciprofloxacin is not used in the treatment of Lyme disease. Antibiotics used for erythema migrans include doxycycline, amoxicillin and cefuroxime. Second-line treatments are the macrolides azithromycin and erythromycin. Intravenous (IV) penicillins and cephalosporins may be used for more advanced Lyme disease.

C	Prednisolone 50 mg od

Oral steroids are not used in the management of Lyme disease. Instead, steroidal therapy can suppress the immune system, allowing the bacteria to flourish, rather than attacking the infection.

D	Topical hydrocortisone 1%

Topical steroids, such as hydrocortisone (mild potency), are not of help in the treatment of this infectious condition.

E	No treatment

Erythema chronicum migrans disappears spontaneously within 3–4 weeks. If left untreated, the disease may disseminate, affect other organs and progress to the next stage, which can include neurological symptoms and arthritis.

A 24-year-old woman presents to the General Practitioner with rapidly progressive milky white patches of skin over the face, trunk and extremities for the past three months.

On examination, her blood pressure is 100/60 mmHg and her heart rate is 104 bpm. She has postural hypotension. A diffuse swelling was found in the front of the neck, which moves with swallowing. On further workup, anti-microsomal and anti-thyroglobulin antibodies were found to be positive.

Investigation	Result	Normal value
Free T3 (fT_4)	7.3 pmol/l	11–22 pmol/l
Free T4 (fT_3)	2.1 pmol/l	3.5–5 pmol/l
Thyroid-stimulating hormone (TSH)	64 µU/l	0.17–3.2 µU/l

What would be the appropriate initial management for this patient?

Dr. Jamil Alrajhi

Apr 6, 2025

Your answer was incorrect

A	Narrow-band ultraviolet B (NBUVB) phototherapy
B	Oral betamethasone pulse therapy with NBUVB
C	Punch grafting
D	Thyroxine replacement
E	Topical corticosteroids

Explanation

B	Oral betamethasone pulse therapy with NBUVB

Oral high-dose betamethasone pulse therapy on weekends for 3–6 months, along with narrow-band ultraviolet B (NBUVB) twice to thrice weekly, is the most appropriate choice here to control unstable, progressive vitiligo involving a larger body surface area.

This patient also has rapidly progressive vitiligo; hence, initiation of oral betamethasone pulse therapy with NBUVB after sending 0800 serum cortisol is the most appropriate line of management.

D	Thyroxine replacement

This patient has autoimmune thyroiditis which is commonly associated with vitiligo. However, thyroxine replacement should not be started in these patients with multiple autoimmune diseases before ruling out autoimmune adrenalitis. In this patient with postural hypotension, serum cortisol taken at 0800 should be sent to rule out adrenal insufficiency. If thyroxine replacement is started before steroid replacement, thyroxine will further catabolise glucocorticoids and can precipitate an Addisonian crisis.

A	Narrow-band ultraviolet B (NBUVB) phototherapy

Monotherapy with NBUVB will not be effective enough to control active disease.

C	Punch grafting

Surgery is not an option unless the disease has been stable for a year.

E	Topical corticosteroids

This patient has unstable, progressive, and active vitiligo. In these patients, monotherapy with topical steroids will not be enough to control active disease

72861

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Difficulty: Average

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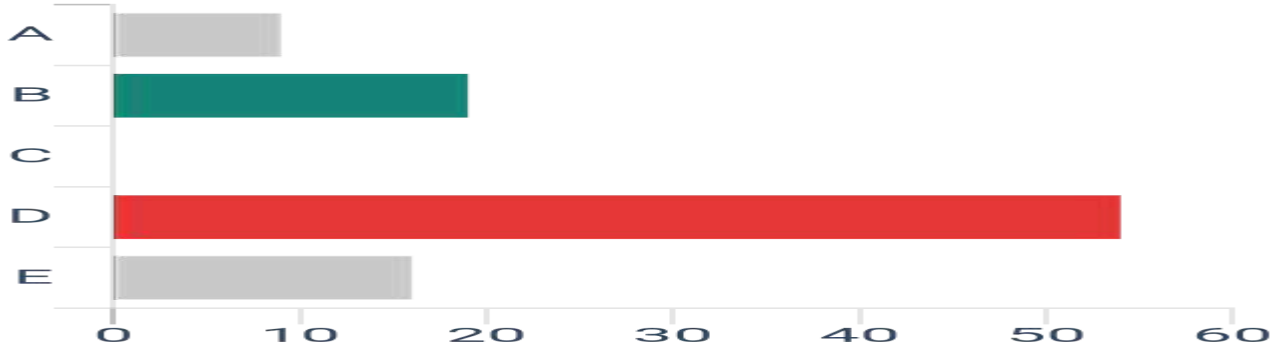
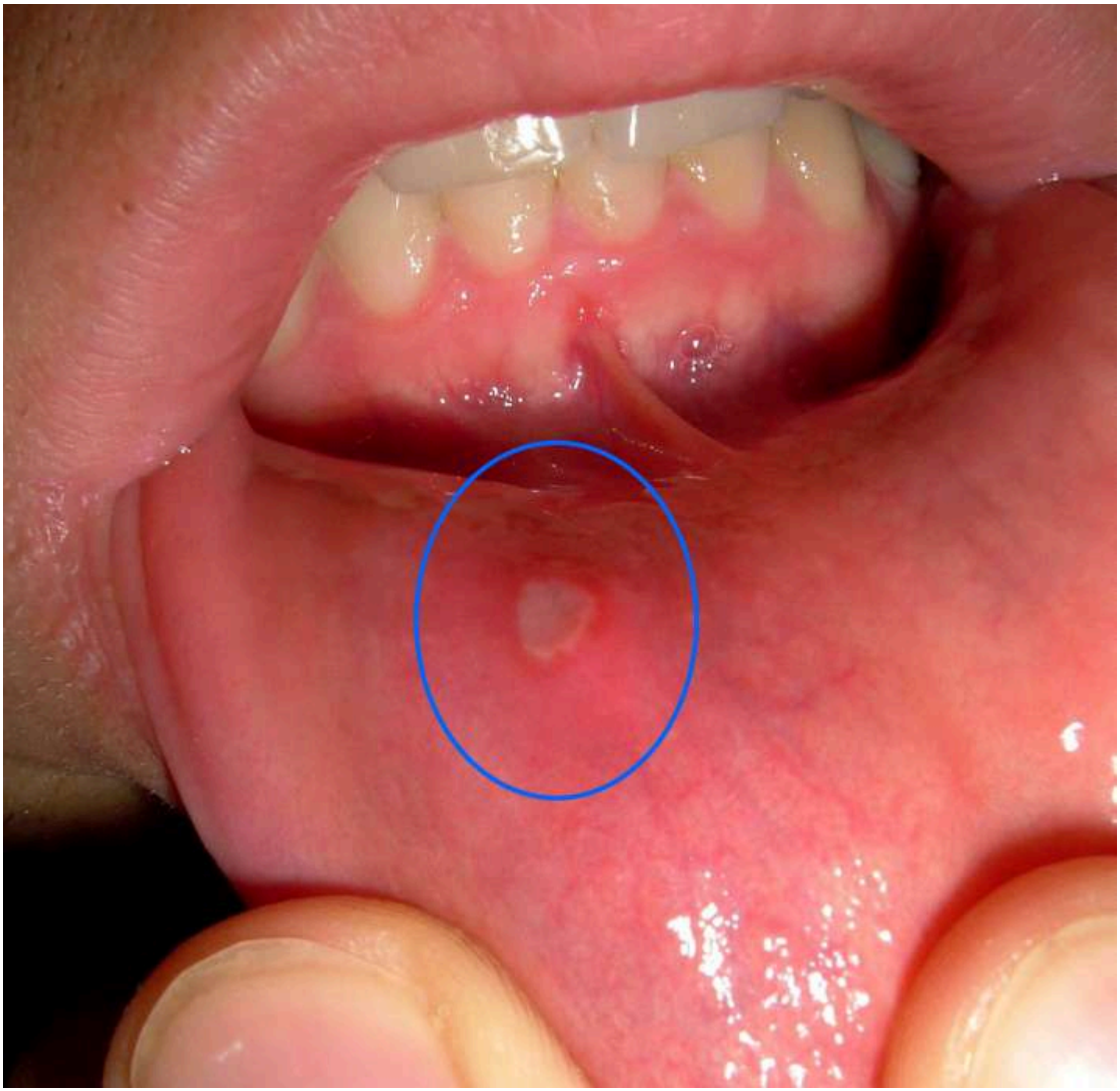


A 38-year-old man presents to the Dermatology Clinic with a five week history of a painless ulcer on his lower lip. He was given aciclovir by his General Practitioner (GP), with little improvement, and has also been using chlorhexidine mouthwash.

Over the last week, he has been feeling tired, with a sore throat and flu-like symptoms. He tells you that he has had at least ten sexual partners over the last three months, with some of whom he has had unprotected sexual intercourse. He is a smoker of 30 cigarettes a day and drinks 25 units of alcohol per week.

On examination, there is an ulcerated lesion on the inner lower lip, shown below:



There are two other smaller ulcers on the inner right cheek. There are no other skin lesions; he has palpable cervical lymph nodes and a small patch of occipital alopecia.

Respiratory, abdominal, neurological and genital examinations are unremarkable.

Which of the following diagnoses is most likely?

Your answer was incorrect

A	Chancroid

B	Secondary syphilis
C	Primary herpes simplex virus (HSV) infection
D	Gonorrhoea
E	Behçet's disease

Explanation

B	Secondary syphilis

The patient's symptoms are due to secondary syphilis but could also be accounted for by human immunodeficiency virus (HIV) seroconversion. Secondary syphilis usually commences 4–10 weeks after the primary chancre (which can also occur in the oral cavity). Patients usually present with maculopapular rashes affecting the entire trunk, but any form of rash may occur. Alopecia is well recognised, as are multiple painless aphthous ulcers. Sore throat, myalgia, fever and weight loss are also common.

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D	Gonorrhoea

A significant number of patients may be asymptomatic. Those with symptoms may present with a combination of urethral discharge, dysuria, fatigue and lower abdominal pain.

A	Chancroid

Chancroid is a sexually transmitted infection due to the bacterium *Haemophilus ducreyi*. It presents with painful ulcers in the genital area and lymphadenopathy.

C	Primary herpes simplex virus (HSV) infection

Primary infection with HSV can lead to a flu-like illness reminiscent of the above description. However, the presence of a painless ulcer in a high-risk patient is indicative of syphilis.

E	Behçet's disease

Behçet's disease is an inflammatory condition of unknown aetiology can lead to numerous signs and symptoms such as mouth and genital ulceration, uveitis, abdominal pain, nausea and diarrhoea, as well as cardiovascular and neurological symptoms.

33384

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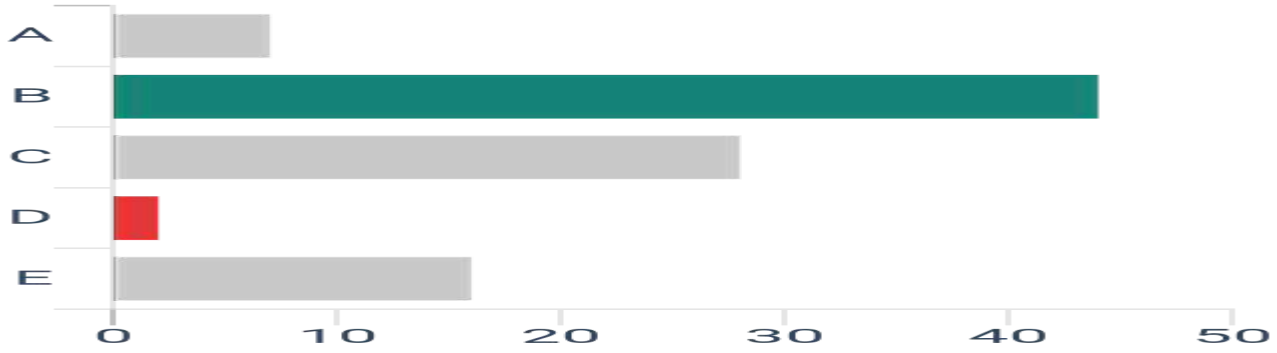

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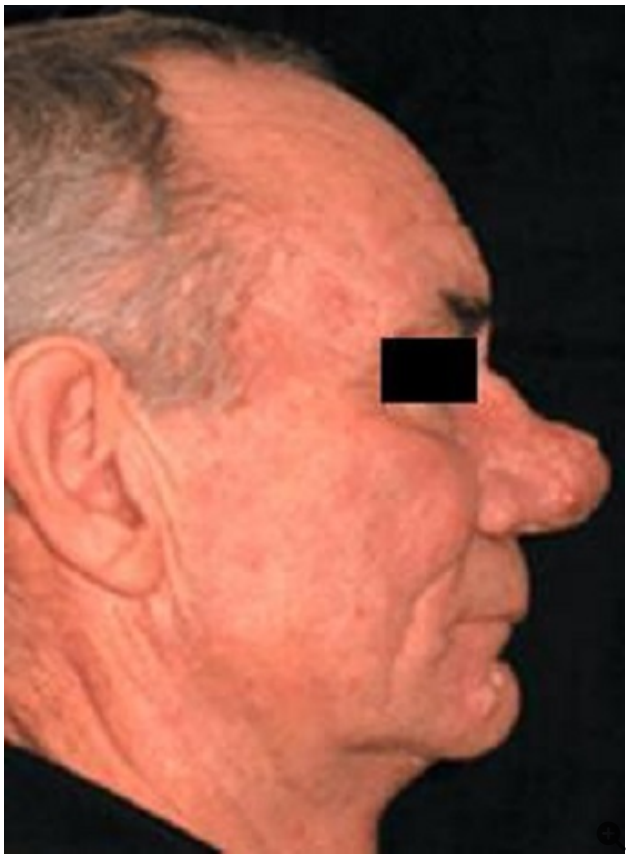
Responses Correct:	8
Responses Incorrect:	48
Responses Total:	56
Responses - % Correct:	14%

Syphilis

Expanded explanations

A 58-year-old man presents to his General Practitioner (GP) with progressive changes in his facial skin. He has noticed reddening with painful spots on his face and a gradual swelling and distortion of his nose.



In his past medical history, he had a renal transplant 30 years ago. He takes a list of medications but he cannot remember exactly what they are. He is a non-smoker and drinks 14 units of alcohol per week. He has no allergies. He tells you that since he went on holiday to Spain this year the symptoms have got worse. He lives with his wife.

On examination, the patient has numerous erythematous and yellowish papules and nodules as well as swelling of the nose. The skin over the trunk is covered with extensive seborrhoeic warts. There were a couple of actinic keratoses on the scalp.

What diagnosis would best explain the appearance?

Your answer was incorrect

A	Acne vulgaris
B	Cutaneous lymphoma

C	Dyslipidaemia
D	Rosacea
E	Uraemia

Explanation

D	Rosacea

This gentleman has rhinophyma – localised swelling of soft tissue with variable combinations of sebaceous hyperplasia, fibrosis and lymphoedema. Sebaceous hyperplasia is a recognised side effect of ciclosporin treatment, particularly on the skin of renal transplant patients when exposed to sunlight.
Rosacea is a rash which, although more common in females, occurs also in males and is associated with rhinophyma. It is an erythema of the face with telangiectasia. It is similar to acne in that there are papules and pustules but no comedones. Complications such as blepharitis, chronic lymphoedema of the face and rhinophyma occur more commonly in men.

Steroid rosacea usually occurs as a result of topical steroids applied to the face. Unfortunately, a large number of people use other family members' creams and ointments without seeking advice from the doctor first. It is important to ensure that you question the patient about use of all topical treatments.
Contrary to popular belief, it is not associated with excessive alcohol intake. Skin cancers, despite being more common in renal transplant patients, always present as ulcerative nodular lesions before infiltrating deeper. Active rosacea should be treated with oral antibiotics in the first instance. Treatment of the rhinophyma by surgical excision or physical ablation of excess tissue may improve cosmetic appearance.

C	Dyslipidaemia

Painless yellow papules (eruptive xanthomas) are seen in groups on the torso, elbows and buttocks, and are associated with hypertriglyceridaemia.

A	Acne vulgaris

Acne vulgaris occurs as a more generalised papular and pustular rash, not only affecting the face but affecting the back and chest as well.

B	Cutaneous lymphoma

Cutaneous lymphoma occurs as a generalised erythematous rash, is intensely itchy and is usually seen in more elderly patients.

E	Uraemia

Uraemia is associated with dermatitis and itching, rather than the rash largely confined to skin folds around the nose seen here.

33387

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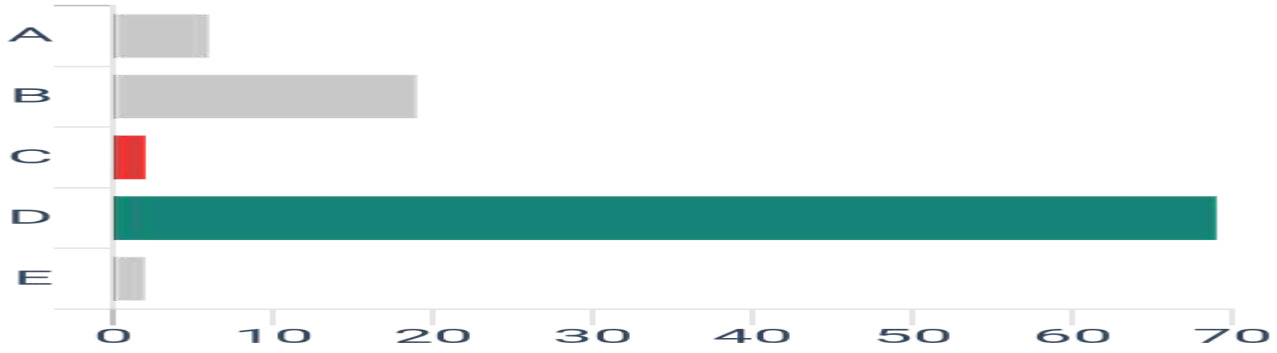

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Responses Incorrect:	49
Responses Total:	57
Responses - % Correct:	14%

Rosacea

An 81-year-old woman is admitted to the Emergency Department (ED) following a fall, and is noted by the nursing staff to have a brown-coloured, pigmented rash to both shins.

On examination, pedal pulses are present, while sweat is visible.She has thin hair and a tremor is visible.

Which of the following features would you expect to find?

Your answer was incorrect

A	Exopthalmos
B	Erythematous malar rash
C	Striae
D	Slow relaxing reflexes
E	Mild hypothermia

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

A	Exopthalmos

This woman's rash is pretibial myxoedema; therefore, exophthalmos is the correct answer, given the patient has thin hair and tremor, which is suggestive of the diagnosis of hyperthyroidism.

E	Mild hypothermia

This would be more likely associated with hypothyroidism, especially in the elderly population.

B	Erythematous malar rash

Also known as butterfly rash, this is a facial rash that is typically seen in systemic lupus erythematosus (SLE).

C	Striae

Striae start by looking red in colour (striae rubra) and progress over time to look white (striae alba). Causes are multiple and include rapid growth spurts, pregnancy, Cushing syndrome and treatment with corticosteroids.

D	Slow relaxing reflexes

Slow relaxing reflexes are seen in hypothyroidism; however, this patient's rash along with a tremor and visible sweat points towards hyperthyroidism.

71464

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Responses Correct:	8
Responses Incorrect:	50
Responses Total:	58
Responses - % Correct:	14%

Thyrotoxicosis

A 35-year-old woman presents with asymptomatic, firm skin-coloured papules on the dorsum of her hands that have been progressively enlarging over the last six months. The lesions are arranged in an annular configuration. She denies any history of recent illness, trauma or systemic symptoms. Physical examination reveals no mucosal involvement or systemic abnormalities.

Investigations:

Which investigation is most appropriate to confirm the most likely diagnosis?

Your answer was incorrect

A	Skin biopsy with histopathological examination
B	Serum antinuclear antibodies
C	Potassium hydroxide preparation of a skin scraping
D	Skin patch testing
E	Blood glucose level measurement

Explanation

A	Skin biopsy with histopathological examination

A skin biopsy is definitive for diagnosing granuloma annulare. Histopathology typically shows necrobiotic collagen surrounded by palisading histiocytes and a lymphocytic infiltrate. This distinguishes granuloma annulare from other annular dermatoses such as tinea corporis or sarcoidosis.

E	Blood glucose level measurement

While diabetes mellitus is associated with disseminated granuloma annulare, measuring the blood glucose level is not the primary diagnostic investigation. It may, however, be performed in patients with widespread or recurrent lesions as part of a systemic evaluation.

B	Serum antinuclear antibodies

Anti-nuclear antibodies (ANA) testing is used to evaluate autoimmune conditions such as lupus. While granuloma annulare may occasionally be seen in association with autoimmune diseases, ANA testing is not necessary for its diagnosis.

C	Potassium hydroxide preparation of a skin scraping

Potassium hydroxide preparation is used to diagnose fungal infections such as tinea corporis. Although tinea may mimic granuloma annulare with annular plaques, the lack of scaling in this case makes a fungal infection unlikely.

D	Skin patch testing

Patch testing is used to identify allergens in allergic contact dermatitis. Granuloma annulare is not an allergic or a hypersensitivity condition and does not require this investigation.

74421

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Difficulty: Average

A 32-year-old woman presents to the Acute Medical Clinic for review. She is concerned about the eruption of multiple lesions over her chest and back over the last few weeks.

She has no past medical history, but on questioning she reveals that she had a fever three weeks ago alongside a sore throat. This improved within a week.

She takes no regular tablets but was taking ibuprofen for her sore throat.

A photograph of her back is shown below:

Which treatment would be the most appropriate to accelerate recovery?

Your answer was incorrect

A	Refer for tonsillectomy
B	Antibiotics
C	Phototherapy
D	Systemic corticosteroids

E	Methotrexate

Explanation

C	Phototherapy

This patient has guttate psoriasis. Guttate psoriasis is heavily associated with a preceding streptococcal infection, usually pharyngitis or tonsillitis typically 2–3 weeks before a rash is noticed. Presentation is an acute papular rash of the trunk and proximal extremities. These are often described as droplets. There may be a family history of psoriasis. Prognosis is generally good, with the condition running a self-limiting course taking weeks to a few months to resolve. Previously affected areas may show changes in levels of inflammation. Recovery can be hastened by using phototherapy or topical steroids, with emollients to provide symptom relief.

B	Antibiotics

Antibiotics are often prescribed for guttate psoriasis due to the association with streptococcal infection, but studies have failed to demonstrate any improvement in the recovery or avoidance of complications when given. In acute infections, this would be warranted, but this patient's infection has already resolved.

A	Refer for tonsillectomy

Tonsillectomy may be considered in chronic guttate psoriasis as this may be a source of recurrent streptococcal infection. However, this patient is likely to improve with minimal intervention.

D	Systemic corticosteroids

As this patient has a condition which is largely self-limiting, systemic steroids are not indicated. The side-effects would likely outweigh any benefits.

E	Methotrexate

This patient has guttate psoriasis which is self-limiting in most patients. It would be unreasonable to start methotrexate due to the potential side-effects of this treatment.

A 34-year-old woman presents to the Dermatology Clinic for review. She has a history of coeliac disease, for which she follows a gluten-free diet, but is otherwise well. She has noticed non-scarring hair loss which began as a small area on the posterior aspect of her scalp, but has increased over the past few months.

An image of her hair is shown below.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Alopecia areata
B	Androgenic alopecia
C	Dermatitis herpetiformis
D	Lichen planus
E	Tinea capitis

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

A	Alopecia areata

This patient has non-scarring hair loss against a history of pre-existing treated autoimmune disease – the coeliac disease reported here. The pattern of hair loss shown on the image is consistent with alopecia areata, rather than other causes of non-scarring hair loss such as androgenic alopecia. Spontaneous regrowth does occur in around half of patients, but many patients will experience relapses. Intralesional and topical corticosteroids are used in the treatment of alopecia, although the response is often very poor.

E	Tinea capitis

Tinea capitis fungal infection results in a circular area of hair loss with scaling and erythema around the margin of the circle. There are also broken-off hairs 1–3 mm above the level of the scalp.

B	Androgenic alopecia

Androgenic alopecia results in bitemporal and central recession of hair, rather than the irregularly shaped area of posterior hair loss seen here.

C	Dermatitis herpetiformis

Dermatitis herpetiformis is associated with an intensely itchy rash with small vesicles, which affect extensor surfaces of the arms and legs, buttocks and upper thighs.

D	Lichen planus

Lichen planus is associated with smooth white patches where there is hair loss; there may also be signs of erythema and skin scaling around hair follicles at the margins of an area of hair loss.

71580

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Difficulty: Easy

An 18-year-old woman is reviewed in the Dermatology Clinic. She is feeling quite tearful as her acne has been particularly severe over the past few months. You are considering treating her with oral retinoid therapy.

Past medical history of note includes epilepsy, for which she takes carbamazepine; she has also been treated with tetracyclines intermittently. She is currently using the combined oral contraceptive pill (COCP). You elect to begin therapy with isotretinoin.

Which of the following is the most important step before commencing isotretinoin?

Your answer was incorrect

A	Warn her she will need to reduce her dose of carbamazepine
B	Arrange a pregnancy test
C	Do baseline liver function tests
D	Do baseline renal function tests
E	Warn her about the possibility of mood changes

Explanation

B	Arrange a pregnancy test

Isotretinoin is highly effective for treating acne vulgaris. It is a synthetic 13-cis isomer of naturally occurring trans-retinoic acid. It decreases sebum production and sebaceous gland size. It is highly teratogenic, and female patients using the drug must have a negative pregnancy test and commit to effective contraception for at least one month pre-treatment and for at least one month after the cessation of therapy.

E	Warn her about the possibility of mood changes

Mood changes are possible, but pregnancy testing is still the crucial step before starting therapy.

A	Warn her she will need to reduce her dose of carbamazepine

Isotretinoin has been known to reduce the plasma concentration of carbamazepine, so it is important to monitor impact on seizure control; however, still the most important intervention is to exclude pregnancy prior to starting treatment.

C	Do baseline liver function tests

Both liver function tests and fasting lipids are recommended before starting therapy, although they are still trumped in importance by a pregnancy test.

D	Do baseline renal function tests

Only baseline liver function tests and lipids are mandated before therapy.

18521

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Difficulty: Easy

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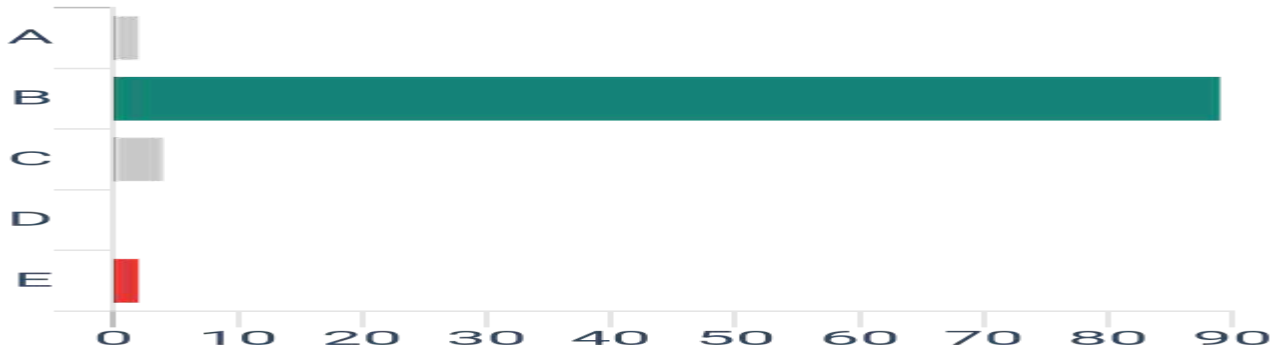

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A 72-year-old woman attends her General Practitioner (GP) for the results of a recent gastroscopy examination and barium enema. She mentions a rash on her armpit.

On examination, both her axillae have pigmented, velvety, thickened areas.

What is the likely result from her investigations?

Your answer was incorrect

A	Coeliac disease
B	Crohn's disease
C	Gastric adenocarcinoma
D	*Helicobacter pylori* infection
E	Ulcerative colitis

Explanation

C	Gastric adenocarcinoma

The above is a typical description of acanthosis nigricans, which is most commonly associated with gastric adenocarcinoma. Other associations include obesity and diabetes mellitus.

E	Ulcerative colitis

Like Crohn's disease, ulcerative colitis is also associated with erythema nodosum and pyoderma gangrenosum, but not with acanthosis nigricans.

A	Coeliac disease

Coeliac disease is not associated with the above rash but is closely linked with dermatitis herpetiformis (an intensely itchy vesicular eruption).

B	Crohn’s disease

Crohn’s disease is associated with erythema nodosum and pyoderma gangrenosum, as well as extraintestinal Crohn’s deposits.

D	*Helicobacter pylori* infection

Neither *H. pylori* infections nor any associated gastric ulcers are linked with any specific cutaneous manifestations.

9188

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Responses Incorrect:	55
Responses Total:	63
Responses - % Correct:	13%

A 32-year-old man, who is a smoker of one packet of cigarettes per day, is referred to the Dermatology Clinic by his Dentist. He has noticed whitish areas over the side of the tongue, as shown in the photograph below, which do not come away when the tongue is brushed.

What is the most likely diagnosis?

Your answer was incorrect

A	Oral hairy leucoplakia
B	Candidiasis
C	Squamous cell carcinoma
D	Lichen planus
E	Syphilitic mucous patch

Explanation

A	Oral hairy leucoplakia

This is an oral mucosal disease first described in 1984; it is associated with Epstein–Barr virus (EBV) and occurs almost exclusively in patients who are immunocompromised, particularly those infected with HIV. As well as being a sign of AIDS, it has also been described in association with inflammatory bowel disease and Behçet's disease. It is non-painful, and the appearance of the white plaque may change slightly from day to day. Smoking more than a pack of cigarettes a day is correlated positively with development of OHL in men who are

HIV-positive. The risk of developing OHL doubles with each 300-unit decrease in CD4 count. Diagnosis is clinical, though biopsy may be helpful in some cases to exclude dysplasia or malignancy. Treatment is of the underlying disorder, most often with anti-retroviral therapy.

C	Squamous cell carcinoma

Whilst smoking is an important risk factor for oral cancer, it usually presents with a discrete lesion, which may be ulcerated.

B	Candidiasis

This is associated with more extensive adherent white plaques. Typically, these can be removed by brushing to leave an eroded, red area.

D	Lichen planus

The Wickham's striae of oral lichen planus form a reticular white network, rather than the solid plaques seen here.

E	Syphilitic mucous patch

This occurs in secondary syphilis, typically presenting as a grey or white plaque. It may be solitary or multiple. Coalescence may result in classical 'snail-track' ulceration.

6349

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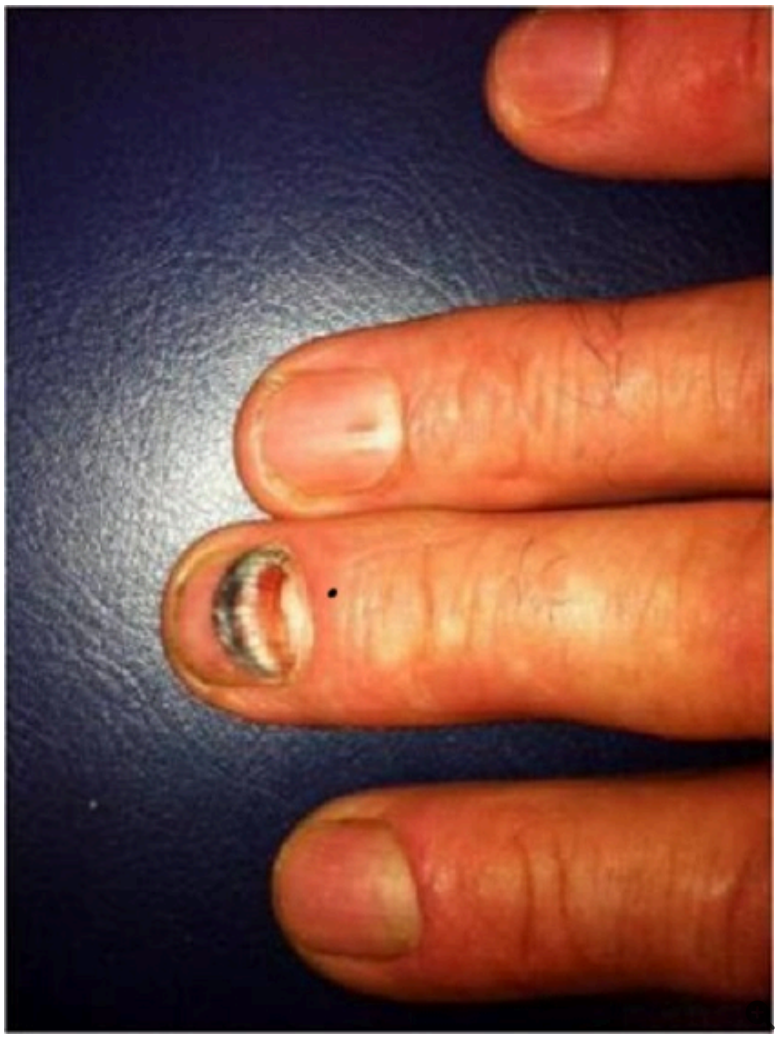
Difficulty: Easy

A 26-year-old builder attends the Dermatology Clinic, concerned that he may have ‘skin cancer’ under his nail. He could not recall any previous trauma to the nail.



Dr. Jamil Alrajhi

Apr 6, 2025

What is the most likely diagnosis?

Your answer was incorrect

A	Subungual melanoma
B	Traumatic nail change
C	Pseudomonas infection
D	Onychomycosis

E	Argyria

Explanation

B	Traumatic nail change

Traumatic nail change is suggested by the occupation of the patient. (Patients often don't recall an episode of trauma.) Also the different colours lined symmetrically and longitudinally suggest an old haematoma. Hutchinson's sign is negative, (hyperpigmentation of the nail bed and matrix).

D	Onychomycosis

This causes yellow or brown nail discoloration, with brittle, crumbling nails.

A	Subungual melanoma

In subungual melanomas are associated with a positive Hutchinson's sign, (hyperpigmentation, (usually blue / black) of the nail bed and matrix).

C	Pseudomonas infection

Pseudomonas causes black or green nail discoloration versus the band of pigment change across the nail related to trauma.

E	Argyria

Argyria is silver poisoning, and leads to blue nail discoloration, not confined to a single nail as is seen here.

39077

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Difficulty: Difficult

A 44-year-old man presents to the Emergency Department with a painful lesion on his leg after a recent holiday. His background includes a long history of diarrhoea. He noticed what he thought was an insect bite some days previously, which rapidly progressed to the lesion depicted below. He started feeling unwell with the development of the lesion and describes general malaise and arthralgia.

What is the most likely diagnosis?

Your answer was incorrect

A	Acute neutrophilic dermatosis (sweet syndrome)
B	Bullous pemphigoid
C	Erythema nodosum
D	Pyoderma gangrenosum (PG)
E	Tick typhus

Explanation

D	Pyoderma gangrenosum (PG)

Typically, this starts as a small papule or pustule that may often be mistaken for an insect bite. This rapidly spreads into an ulcerating lesion, with pain being a predominant feature. Although pyoderma gangrenosum (PG) may occur at any age, it is most common in the fourth and fifth decades of life. Sex distribution is equal and about half of cases occur in association with a systemic illness.

Inflammatory bowel disease (IBD) is the strongest association, although < 1% of people with IBD develop PG; other associations include rheumatological conditions (rheumatoid arthritis, seronegative spondyloarthropathies, etc.), liver disease (particularly autoimmune hepatitis) and haematological conditions (including both lymph and myeloproliferative disorders).

The diagnosis is primarily based on clinical findings. There are no typical characteristic histological features, although biopsy is useful in helping to exclude other diagnoses.

C	Erythema nodosum

Erythema nodosum is not typically associated with skin ulcers. For erythema nodosum, IBD is a well-recognised risk factor. However, this manifests as red-purple subcutaneous nodules, particularly in the pretibial region.

A	Acute neutrophilic dermatosis (sweet syndrome)

Acute febrile neutrophilic dermatosis (sweet syndrome) is associated with inflammatory bowel disease (IBD) and medications used in IBD treatment such as azathioprine and tumour necrosis factor (TNF) alpha inhibitors can present with erosions and ulcers resembling atypical pyoderma gangrenosum (PG). However, lesions are typically extremely painful and it is much rarer than PG, with only a few hundred reported cases of sweet syndrome in the medical literature.

B	Bullous pemphigoid

Bullous pemphigoid typically presents as a large, tense blister that erupts to form crusted erosions, unlike the lesion seen here. It typically affects the flexures and proximal areas of the limbs and does not occur as isolated lesions. It does have an association with human leukocyte antigen and cases have been reported in patients with IBD; however, this is incredibly rare.

E	Tick typhus

Topical corticosteroids are the typical first-line treatment, with systemic corticosteroids reserved for refractory disease. In the most severe cases, other potent immunosuppressants including ciclosporin, mycophenolate mofetil or anti-tumour necrosis factor alpha agents may be required.

A 29-year-old man attends his General Practitioner (GP), complaining of an itchy rash over his penis for several days. He has a background of eczema as a child and smokes five cigarettes per day. He works in a call centre and part-time washing up in a restaurant to support his young family. On examination, his GP notes palpable red nodules on his penis and scrotum and, incidentally, a rash on his hands and wrists.

Investigations:

Which is the most appropriate treatment?

Your answer was incorrect

A	Oral aciclovir
B	Topical clotrimazole
C	Topical corticosteroids
D	Topical emollients
E	Topical malathion

Explanation

E	Topical malathion

This man has scabies; red/brown papules and nodules on the penis and scrotum are pathognomonic for this condition. The images show vesicles and areas of excoriations in the finger web spaces and wrists. The whole household should be treated, and linen, etc. washed at 60 °C. Treatment may worsen the itch for a few days and itching may persist for up to two weeks post-effective treatment, antihistamines and calamine lotion may help.

Image source: https://commons.wikimedia.org/wiki/File:Trieu-chung-benh-ghe-nuoc-600x360.jpg (https://commons.wikimedia.org/wiki/File:Trieu-chung-benh-ghe-nuoc-600x360.jpg)

C	Topical corticosteroids

Although the patient's history of eczema and job as a dishwasher may have put him at risk of topical dermatitis, the presence of the rash on his penis and the typical rash affecting the web spaces indicates scabies.

A	Oral aciclovir

Oral aciclovir would be the treatment of choice for genital herpes infection. This patient has an itchy rash due to scabies that would not respond to this treatment.

B	Topical clotrimazole

Topical clotrimazole is used for the treatment of fungal disease, which is usually confined to flexural creases, rather than the generalised itchy rash seen here.

D	Topical emollients

Topical emollients would not be effective, given that this patient has an infective skin rash.

A 24-year-old woman is admtted to hospital with a flu-like illness, which has worsened over the past two days, and she now has a productive cough, shortness of breath and fever. A presumed diagnosis of community-acquired pneumonia was made, and the patient was started on oral co-amoxiclav 625 mg three times daily.

Two days later, she developed a non-pruritic macular rash over both legs and arms (described as pink-red blotches with a paler centre), which was associated with a burning sensation.

What is the most likely cause of the rash?

Your answer was incorrect

A	Pityriasis rosea
B	Erythema nodosum
C	Erythema multiforme (EM)
D	Urticaria
E	Dercum's disease

Explanation

C	Erythema multiforme (EM)

The answer is Erythema multiforme (EM) (Option C).

The patient has a symmetrical erythematous, non-pruritic rash affecting the upper and lower limbs, following a community-acquired pneumonia. The diagnosis is most likely EM, and the rash may be drug-related or a consequence of infection with *Mycoplasma* pneumonia. EM is an acute mucocutaneous hypersensitivity reaction of variable severity, characterised by a symmetrically distributed skin eruption, with or without mucous involvement. The more common form (EM minor) consists of skin lesions with involvement of no more than one mucosal surface. EM major, or Stevens–Johnson syndrome, is more severe, involving two or more mucous membranes, with more variable skin involvement. EM can be triggered by a variety of stimuli such as viral and bacterial infections and medications. Approximately 50% of cases are idiopathic, with no identifiable cause.

E	Dercum's disease

Dercum's disease (Option E) is incorrect.

This condition (also known as adiposis dolorosa) is of unknown aetiology and characterised by a combination of lipomas, painful subcutaneous plaques and non-traumatic ecchymoses.

A	Pityriasis rosea

Pityriasis rosea (Option A) is incorrect.

Pityriasis rosea is an acute exanthem that initially presents with a primary plaque (herald patch), followed, 1–2 weeks later, by a generalised rash, which can last up to 6 weeks. It is associated with reactivation of herpesviruses 6 and 7. Prodromal flu-like symptoms may precede the herald patch. The herald patch measures 1–2 cm in diameter and is usually located on the trunk. The secondary rash is symmetric and again localised to the trunk and the adjacent areas of the neck and limbs. The rash distribution follows the relaxed skin tension lines and is typically described as a ‘Christmas tree’ pattern.

B	Erythema nodosum

Erythema nodosum (Option B) is incorrect.

Erythema nodosum presents with tender, red lumps on the front of the shins. It is thought to be a hypersensitivity reaction to a number of causes such as: tonsillitis, sarcoidosis, tuberculosis, pregnancy, the contraceptive pill and other medications. Treatment consists of managing the underlying pathology and providing with anti-inflammatory medication to reduce the discomfort.

D	Urticaria

Urticaria (Option D) is incorrect.

Urticaria may be acute or chronic and is characterised by itchy wheals (hives), angio-oedema or both. Chronic forms of urticaria may be further grouped into spontaneous and inducible forms.

A 36-year-old woman presents to her General Practitioner (GP) with widespread pruritus and scaling skin changes all over her body. She believes that they have been there since childhood.

There is a widespread skin rash, part of which is shown in the picture.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Atopic eczema
B	Psoriasis vulgaris
C	Ichthyosis vulgaris
D	Seborrhoeic dermatitis

E	Systemic sclerosis

Explanation

C	Ichthyosis vulgaris

Ichthyosis vulgaris is an inherited, autosomal dominant, causing widespread, scaly skin. It is caused by a mutation in the gene encoding profilaggrin (a protein which is converted into filaggrin, and has a vital role in skin structure) and is one of the most common genetic disorders caused by a single gene.

D	Seborrhoeic dermatitis

This is particularly associated with papules and pustular inflammation, primarily affecting the scalp.

A	Atopic eczema

Atopic eczema is associated with areas of erythema, particularly on flexural skin surfaces, rather than the picture of skin scaling seen here.

B	Psoriasis vulgaris

Psoriasis is associated with erythematous plaques and skin scaling, primarily on extensor skin surfaces.

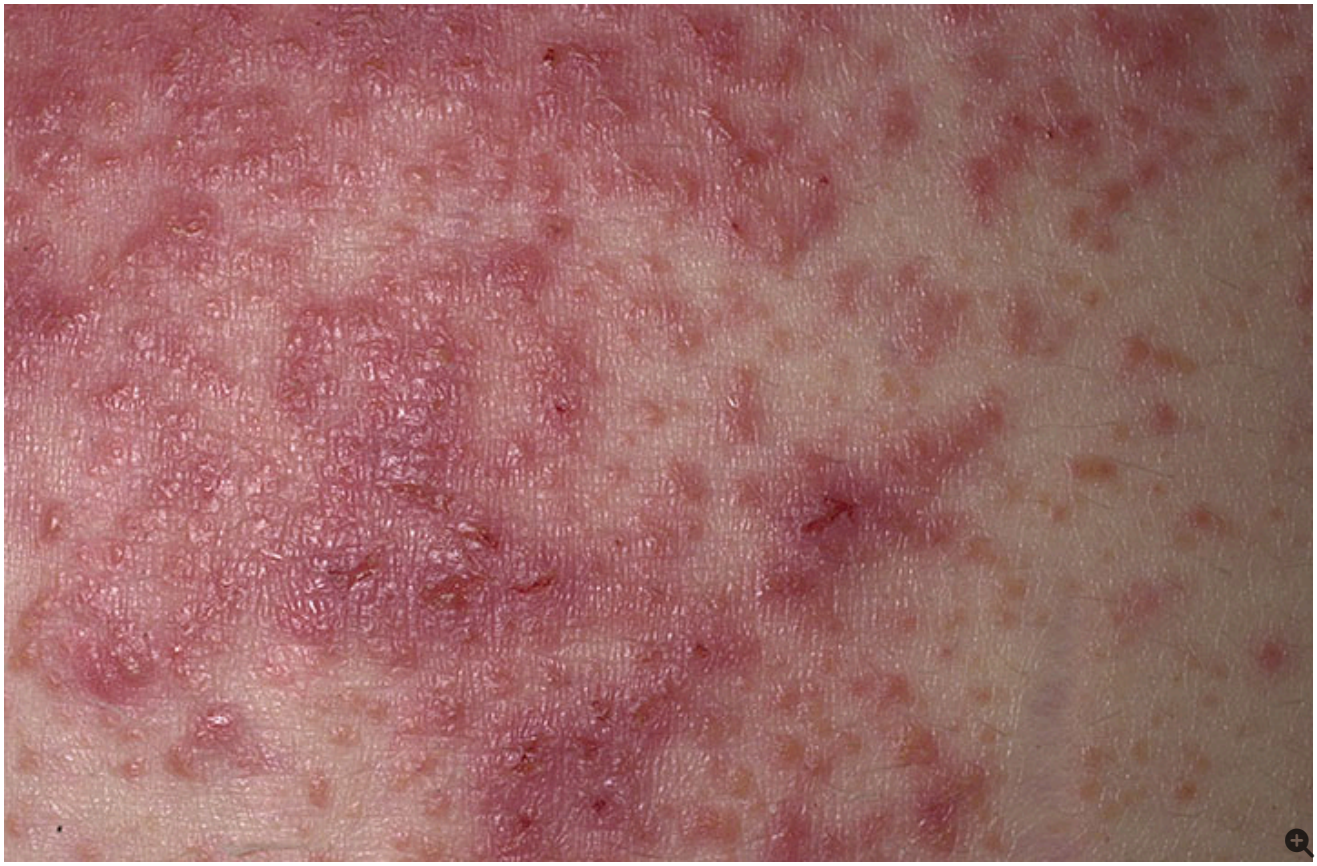
E	Systemic sclerosis

Systemic sclerosis is associated with skin thickening and calcinosis affecting the fingers in particular, tightening of the skin around the mouth, xerostomia, and development of telangiectasia.

Dr. Jamil Alrajhi

Apr 6, 2025

A 40-year-old woman attends the Gastroenterology Clinic for her first annual review; her diarrhoea has been an increasing problem over the past few months. She complains bitterly of an intensely itchy rash which is shown below. The same rash is present on her knees, elbows and back. She has been applying emollients with little effect.



Investigations reveal the following:

Investigation	Result	Normal value
Haemoglobin (Hb)	98 g/l	115–155 g/l
Mean corpuscular volume (MCV)	103 fl	80–100 fl
White cell count (WCC)	7.2×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	203×10^9/l	$150–400 \times 10^9$/l
Sodium (Na^+)	138 mmol/l	135–145 mmol/l
Potassium (K^+)	4.5 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	90 µmol/l	50–120 µmol/l
Albumin	2.7 g/dl	3.5–5.5 g/dl

Alanine aminotransferase (ALT)	32 U/l	5–30 U/l
Bilirubin	9.0 µmol/l	2–17 µmol/l

Given the likely underlying cause of her rash, which of the following is the definitive intervention?

Your answer was correct

A	Topical corticosteroids
B	Oral dapsone
C	Regular chlorpheniramine
D	Dietician referral
E	Oral acyclovir

Explanation

D	Dietician referral

This rash seen here is classical of dermatitis herpetiformis (immunobullous disease with itchy blisters), which occurs with coeliac disease. The anaemia with elevated MCV and low albumin would also indicate that her coeliac is poorly controlled. Review of her diet and reinforcement of the need to remain gluten free is crucial with respect to her long-term health.

Image source: https://commons.wikimedia.org/wiki/File:Dermatitis-herpetiformis2.jpg (https://commons.wikimedia.org/wiki/File:Dermatitis-herpetiformis2.jpg)

A	Topical corticosteroids

Although topical corticosteroids may bring some symptom relief, they are not an appropriate long-term option for control of the rash.

B	Oral dapsone

Although oral dapsone is the most appropriate intervention for symptom relief with respect to her itching, it won't treat her underlying coeliac disease.

C	Regular chlorpheniramine

Symptomatic intervention with anti-histamines is not effective in dermatitis herpetiformis, and won't improve her GI symptoms.

E	Oral acyclovir

Although the condition is termed dermatitis herpetiformis because of the intensely itchy, blistering rash, it has no connection with herpes infection.

9187

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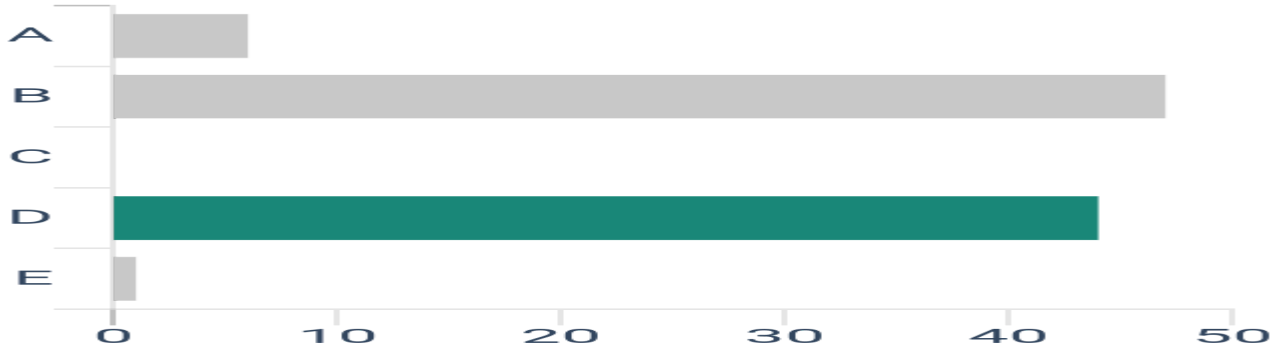
Difficulty: Average

Peer Responses %



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Responses Incorrect:	61
Responses Total:	70
Responses - % Correct:	13%

A 50-year-old woman is admitted to the Neurology Department for resection of a frontal lobe tumour.

The lesion shown in the image was noted on her back by the admitting doctor.

What is the most likely diagnosis?

Your answer was incorrect

A	Melanoma
B	Seborrhoeic keratoses
C	Café au lait macule
D	Neurofibroma
E	Acanthosis nigricans

Explanation

B	Seborrhoeic keratoses

This is an extremely common, harmless skin lesion that first appears during adult life – it is the commonest benign tumour in older individuals. It has also been referred to as basal cell papilloma, senile wart or brown wart. Seborrhoeic keratosis is often initially flat, but becomes raised over time. It may be seen as cosmetically unattractive. Most are asymptomatic, though some itch. Elevated lesions may become traumatised, causing local discomfort. The number of such lesions tends to increase with age. Some individuals have hundreds. The

cause is unknown. In terms of the appearance, colour can range considerably. They are very well defined, and elevated lesions develop a cobblestoned or verrucous surface, as shown in the image. Treatment is not usually necessary, though cryotherapy or curettage may be performed for symptomatic lesions.

C	Café au lait macule

In accordance with the term macule, these are impalpable lesions of tan hyperpigmentation.

A	Melanoma

Although this lesion is hyperpigmented, it has typical features of seborrhoeic keratosis.

D	Neurofibroma

Whilst these may be numerous in neurofibromatosis, they may present as a solitary, sporadic lesion. They are skin-coloured, soft and fleshy, with a smooth surface.

E	Acanthosis nigricans

This causes velvety hyperpigmentation in the flexures, rather than the discrete lesion seen here.

6350

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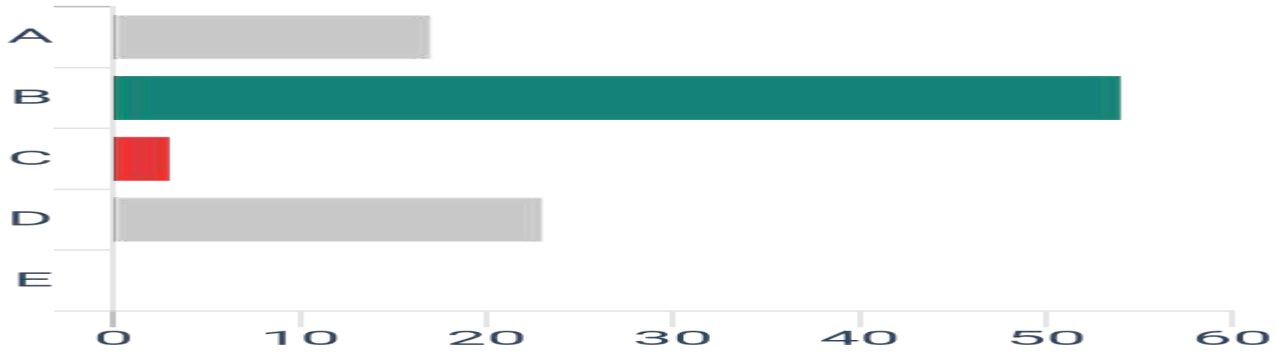
Difficulty: Average

Peer Responses %



A 21-year-old man presents to his General Practitioner (GP) with an itchy, erythematous rash on his back. He is usually fit and well and has no past medical history of note.

Which of the following words best describes the pattern of the skin rash on display?

Your answer was incorrect

A	Serpiginous

B	Nummular
C	Reticulated
D	Annular
E	Linear

Explanation

D	Annular

The pattern here is of ring shaped areas of erythema with central clearing, which fits well with an annular rash.

C	Reticulated

A reticulated rash has a lace or networked pattern, rather than the picture seen here.

A	Serpiginous

Serpiginous rashes are curved, forming the shape of a serpent, (hence their name).

B	Nummular

Nummular rashes are circular and coin shaped and do not have the central clearing seen here.

E	Linear

Linear rashes occur in lines; an example is lichen striatus, which is most commonly seen in children.

39091

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A 34-year-old man with rapidly worsening psoriasis comes to the Dermatology Clinic for review. He has been given some topical steroid creams by his General Practitioner (GP) but these have not improved his condition.

On examination, he has contiguous patches of psoriasis.

Which of the following would be the most appropriate next-stage therapy?

Your answer was incorrect

A	Adalimumab
B	Methotrexate
C	Isotretinoin
D	Topical retinoid cream
E	Hydroxychloroquine

Explanation

B	Methotrexate

The use of methotrexate is indicated in patients with psoriasis who require systemic interventions. Other commonly used systemic treatments include ciclosporin, acitretin and dimethyl fumarate.

E	Hydroxychloroquine

Hydroxychloroquine is used against systemic lupus erythematosus (SLE), rheumatoid arthritis and a number of other photo-aggravated skin disorders.

A	Adalimumab

This is a monoclonal antibody against tumour necrosis factor (TNF) alpha that is effective against both psoriasis and psoriatic arthritis. Its use is limited to those with moderate to severe psoriasis who have failed (or are intolerant of or contraindicated to) first-line systemic agents such a methotrexate and ciclosporin.

C	Isotretinoin

This is a vitamin A analogue used in the management of acne vulgaris, but not psoriasis.

D	Topical retinoid cream

Topical retinoids, such as tarazotene can be used in the management of psoriasis. Although the large area of affected skin means that topical therapies may be impractical.

21016

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Difficulty: Average

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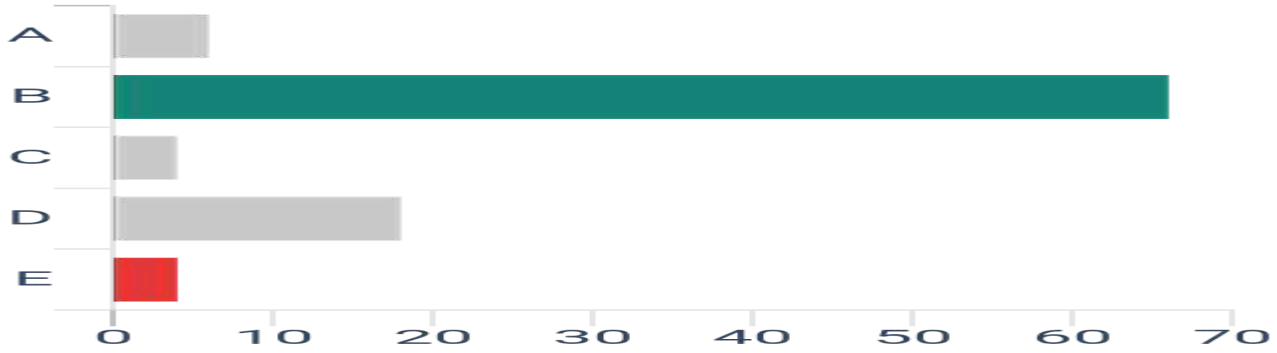

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Responses Correct:	9
Responses Incorrect:	64
Responses Total:	73
Responses - % Correct:	12%

Dr. Jamil Alrajhi

Apr 6, 2025

A 50-year-old man is being treated with intravenous (IV) co-trimoxazole on the High Dependency Unit. His condition appears to be improving; however, he then develops further pyrexia, generalised arthralgia, vesicles in his oral mucosa and genital ulceration. Symmetrical, target-like lesions, with concentric macules and papules, are noticed originally on his palms and soles and then on his face and trunk.

Since then, erythema has become confluent and tender, with raised flaccid blisters which spread with lateral pressure, causing erosions. The drug is stopped.

What is the next most appropriate step in this patient's management?

Your answer was incorrect

A	Analgesia then watch and wait
B	Debridement
C	Intravenous fluid supplementation
D	Systemic corticosteroids
E	Topical steroids

Explanation

C	Intravenous fluid supplementation

Drug triggers are the most common cause of Stevens-Johnson syndrome (SJS), and prompt withdrawal of the suspected drug can improve prognosis.

Medications are the leading trigger of SJS, and therefore, early diagnosis and withdrawal of suspected drugs are very important. In a large multinational case-control study involving 379 cases, the most commonly associated drugs were:

- allopurinol
- aromatic anticonvulsants – carbamazepine, phenobarbital, lamotrigine, phenytoin
- antibacterial sulfonamides – co-trimoxazole
- oxicam non-steroidal anti-inflammatory drugs (NSAIDs).

Also, less frequently implicated are cephalosporins, fluoroquinolones, vancomycin and rifampicin.

Supportive care in SJS is the same as that for major burns and wound care. Intravenous fluid supplementation would be beneficial for the patient and withdrawing the suspected drug will improve the prognosis.

E	Topical steroids

Topical steroids are often prescribed, although there is only limited evidence to support their use. It is more important that the associated drug is stopped and intravenous hydration is provided.

A	Analgesia then watch and wait

Due to the amount of affected skin, along with the oral ulceration, this patient would benefit from intravenous fluids and supportive therapy.

B	Debridement

Only patients with frankly necrotic skin should be debrided, or when a wound isn't healing well on its own.

D	Systemic corticosteroids

The use of systemic corticosteroids in patients has not been evaluated in clinical trials. However, a systematic review of case series and a mortality analysis of the RegiSCAR cohort study did not suggest corticosteroids improved survival rates.

A 35-year-old man presents to Dermatology Clinic. He has a history of hypothyroidism and is currently taking levothyroxine.

He complains of sudden hair thinning, having occurred over several days.

A photograph of his hair is shown below:

What is the most appropriate management plan in the first instance?

Your answer was incorrect

A	Systemic corticosteroids
B	Phototherapy
C	Methotrexate
D	Flucloxacillin
E	Monitor for return of hair growth

Explanation

E	Monitor for return of hair growth

This patient has alopecia areata. This is the appearance of round bald patches, mostly on the scalp as seen in the photograph. It normally presents before the age of 40 and is sometimes familial. It is more common in people with thyroid disease, vitiligo and atopic eczema. It is an autoimmune disorder which can be triggered by viral infection, trauma, hormonal change or emotional stressors.

Prognosis is usually good with spontaneous regrowth of hair, in around half of patients, which may take months. Treatment can be with topical steroids, dithranol or intralesional injections of triamcinolone acetonide, but mostly management is to watch, as such treatments are normally unnecessary.

A	Systemic corticosteroids

In alopecia areata, systemic intravenous (IV) steroids can cause a return of hair growth, but hair may fall out again when steroid treatment stops. Most physicians consider the side-effects of systemic corticosteroid treatment to outweigh the benefits of less drastic options.

B	Phototherapy

Phototherapy is not indicated in hair loss due to alopecia areata. Had there been hair loss due to psoriasis, this would have been a more appropriate option.

C	Methotrexate

Methotrexate shows no benefit in alopecia areata but would be a useful systemic treatment in psoriasis.

D	Flucloxacillin

There is no evidence of bacterial infection and therefore flucloxacillin is not indicated for this patient.

71615

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A 45-year-old man presents to the General Medical Clinic with a rash. This has been gradually developing over the last few weeks. It has been affecting his scalp and causing fine flakes. It is itchy. He has not had anything similar in the past.

He has had acne has a teenager as well as eczema, but both of these problems have not been a cause for concern in decades.

On examination, there is a patchy rash, as shown in the photograph below:

What is the most appropriate management?

Your answer was correct

A	Hydrocortisone 1%
B	Ketaconazole shampoo
C	Dapsone
D	Flucloxacillin

E	Zinc replacement

Explanation

B	Ketaconazole shampoo

This is correct as this patient has seborrhoeic dermatitis. Seborrhoeic dermatitis is inflammation of the skin in areas rich in sebaceous glands. It therefore commonly affects the scalp, chest and face and can present from puberty onwards. It typically occurs in immunocompromised or stressed states, and especially in those with neurological conditions. The latter association is thought to be due to association with reduced movement. The inflammatory reaction is thought to be linked to the yeast *Malassezia*. The rash itself appears as an inflamed and greasy area with fine scaling. Scalp involvement can be managed with a shampoo containing ketoconazole 2% or selenium sulfide. Alternatives include shampoos containing zinc pyrithione – which is found in over-the-counter products such as anti-dandruff shampoo – used twice a week for a month. For the body, intermittent use of a ketaconazole cream and topical hydrocortisone is effective.

A	Hydrocortisone 1%

Topical corticosteroid treatment would be appropriate for scalp eczema. This would be characterised by dryness and itching with other areas affected as well; typically extensor surfaces of the limb and the face in acute episodes. This would be typically appropriate in combination with topical emollients.

C	Dapsone

This would be the correct answer for dermatitis herpetiformis refractory to dietary changes. Dermatitis herpetiformis is a dermatological condition heavily associated with coeliac disease. It presents as a very itchy bullous rash with groups of vesicles on a backdrop of erythema, and typically presents on the scalp, buttocks, elbows and knees. Without the presence of coeliac disease, dermatitis herpetiformis is very unlikely, although this rash can precede coeliac disease. Management is with a gluten-free diet and, if that fails, dapsone.

D	Flucloxacillin

Flucloxacillin would have been an appropriate treatment plan for cellulitis and erysipelas. Cellulitis is an infection of the dermis and the subcutaneous tissues just below the dermis. Erysipelas is a more superficial infection. The primary cause for both is *Staphylococcus aureus* and beta-haemolytic streptococci. Presentation is erythematous, painful and raised skin, with potential for systemic involvement. The presentation of this patient and the appearance of the rash are not consistent with cellulitis or erysipelas.

E	Zinc replacement

Zinc deficiency can lead to alopecia and dermatitis, as well as intellectual disability, nerve damage and hypogonadism; however, it would not explain the sudden onset of a rash in a patient with no risk factors for zinc deficiency or causes of malabsorption. Alopecia can occur with zinc deficiency, as can a generalised dermatitis.

71606

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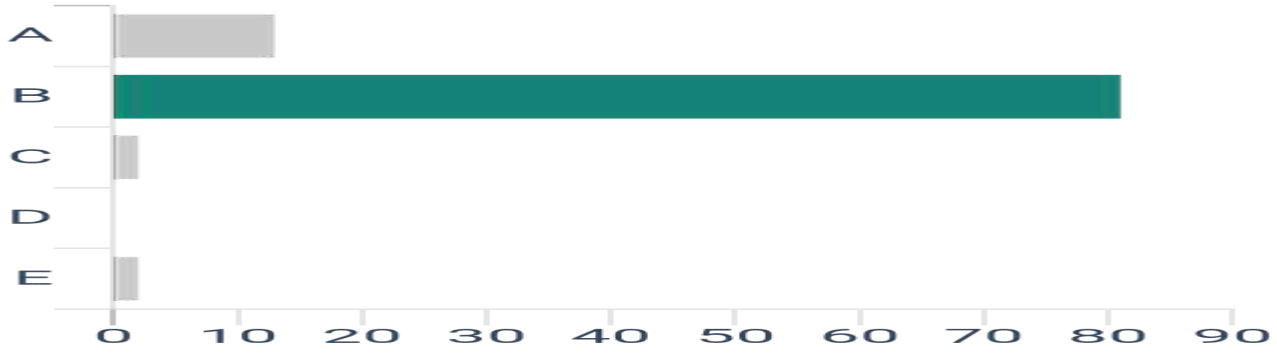
Difficulty: Easy

Peer Responses %



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Responses Correct:	10
Responses Incorrect:	66
Responses Total:	76
Responses - % Correct:	13%

A 55-year-old woman presents to her General Practitioner (GP) as she has noticed unusual growths on her toes and has started to become concerned. They are not painful and do not cause any itching. She denies any trauma.

She had a past medical history of chronic kidney disease (CKD), type II diabetes mellitus (TIIDM) and hysterectomy.

A photograph of her toes is shown below:

What is the most likely diagnosis?

Your answer was correct

A	Subungual fibromas
B	Subungual warts
C	Squamous cell carcinoma (SCC)
D	Seborrhoeic warts

E	Keratoacanthoma

Explanation

A	Subungual fibromas

Subungual fibromas are slow-growing, painless tumours seen in the nail fold. They can be round and feel elastic. They cause complications when elevating the nail and can cause erosion of the distal phalanx.

B	Subungual warts

Subungual warts are caused by human papillomavirus infections and can lead to swellings around the toes as well as on any other skin surfaces. They are more common in children. They present with a cauliflower-like, firm growth which can lead to nail displacement and are often slightly discoloured. It is unusual to develop many warts unless there is evidence of immunocompromise.

C	Squamous cell carcinoma (SCC)

An SCC is a malignant tumour of keratinised cells and is locally invasive with potential for metastatic spread. It occurs with increasing frequency with high UV exposure, especially to fair skin, radiation exposure and following human papillomavirus infections. Presentation is as a single indurated nodular crusted tumour which may ulcerate, especially in areas of high sun exposure or in chronic ulcers. The absence of such appearance makes this an unlikely differential.

D	Seborrhoeic warts

Seborrhoeic warts are benign hyperkeratotic skin lesions usually associated with the elderly, sometimes following sunburn. They are typically flat-topped and stuck-on in appearance with a well-circumscribed border and they have visible keratin dots. The absence of such an appearance makes this diagnosis unlikely. Also, seborrhoeic warts do not cause nail deformity.

E	Keratoacanthoma

Keratoacanthomas are rapidly growing squamous cell lesions that appear over months and spontaneously resolve. They are solitary, round and skin-coloured or reddish papules which may project like a horn. They are different in appearance to this patient's skin condition. Generalised keratoacanthomas can occur but this is very rare and also very pruritic.

Rate this question:

A 60-year-old woman presents to her General Practitioner (GP) with a sudden onset, widespread, erythematous rash, covering 95% of her body.

Which of the following best describes this pattern of rash?

Your answer was incorrect

A	Icthyosis
B	Erythroderma
C	Pustular
D	Urticarial
E	Follicular

Explanation

B	Erythroderma

The diagnosis here is exfoliative rash. Erythroderma refers to an erythematous, (red) scaly/exfoliative dermatitis, involving 90% or more of the skin surface. This may develop suddenly. Addressing temperature regulation and fluid balance is essential. Causes of erythroderma include eczema, especially atopic or seborrhoeic, psoriasis, drug eruption and cutaneous T-cell lymphoma.

C	Pustular

Pustular rashes consist of multiple bullae or vesicles containing purulent material.

A	Icthyosis

Icthyosis is associated with widespread, dry, skin thickening with fish scale-like skin. It does not develop suddenly and is not erythematous.

D	Urticarial

Urticaria is associated with erythematous welts and wheals, rather than the contiguous rash seen here.

E	Follicular

Folliculitis is characterised by inflammation or infection of hair follicles, rather than the generalised inflammation seen in this patient.

39065

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Difficulty: Easy

A 66-year-old woman is admitted under the care of the Cardiology team with chest pain. While awaiting invasive investigations the team has become increasingly concerned by the striking changes affecting the woman's lower legs.

Of note, the patient is a known hypertensive and tells you that in the past she had eczema of her legs, which was treated using bandages. She lives alone and her daughter attends weekly to change the bandages. Over the last three weeks however, her daughter has been on holiday abroad and so hasn't managed to change them.

The patient denies any pain. She is afebrile. The pedal pulses are palpable. The lower legs look as though they are encased in cardboard. There is little oedema but no serous exudate. It smells offensive. The skin on the legs above the knees is entirely normal. Her blood tests on admission are unremarkable. She feels well in herself now that she has been given some analgesia for her chest pain.

Which of the following management options is most preferable?

Your answer was incorrect

A	Moderately potent topical steroids
B	Potassium permanganate soaks
C	Compression stockings
D	Gentle debridement
E	Oral antibiotics

Explanation

D	Gentle debridement

This lady has a common condition found on elderly care wards – retention hyperkeratosis. The treatment for varicose eczema in the past with bandages that were changed infrequently interferes with the normal process of desquamation and results in this condition – a build-up of keratin. It is a benign but malodorous condition that can be treated very well with gentle debridement after soaking in arachis oil, revealing normal skin underneath. Recurrence can be prevented by skin care with emollients.

Image source: https://www.consultant360.com/articles/what-causing-man-s-severe-hyperkeratotic-lower-extremity-lesions (https://www.consultant360.com/articles/what-causing-man-s-severe-hyperkeratotic-lower-extremity-lesions)

C	Compression stockings

Compression stockings are used in the treatment of chronic venous stasis, but they won't resolve the hyperkeratosis seen here.

A	Moderately potent topical steroids

Given the degree of hyperkeratosis here, there is likely to be limited absorption of topical steroids, and debridement is much more appropriate as an initial intervention.

B	Potassium permanganate soaks

Potassium permanganate soaks are normally used as moist dressings to blistering wounds with ulceration or where there is local abscess formation.

E	Oral antibiotics

Oral antibiotics are not required, since once the areas of skin slough have been debrided it is likely that healthy skin will remain underneath.

33388

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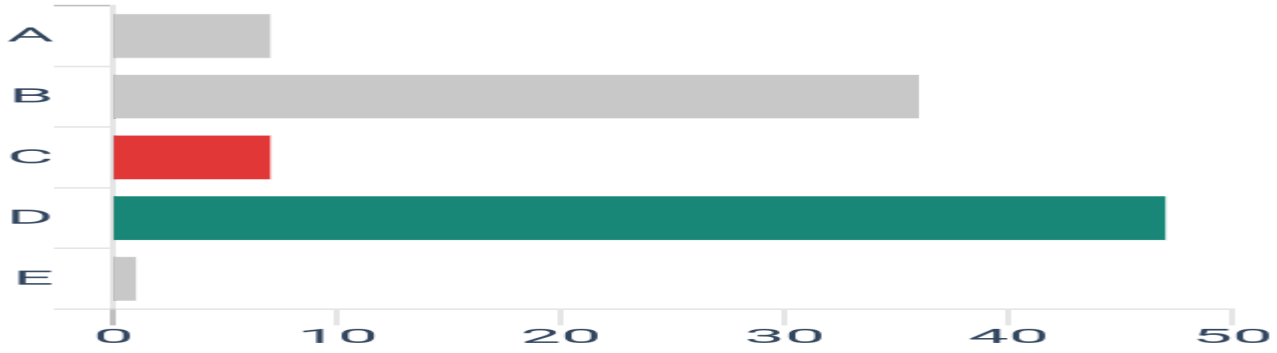
Difficulty: Difficult

Peer Responses %



Session Progress

Responses Correct:	11
Responses Incorrect:	68
Responses Total:	79
Responses - % Correct:	14%

An 18-year-old Moroccan woman, who returned to the United Kingdom (UK) four month ago, attends the Dermatology Clinic with a two day history of the following painful ‘lumps’ on her forearms and shins:

She gives a six week history of intermittent night sweats, fever, and general malaise. During this time, she has had intermittent lower abdominal pain and heavy periods. She has taken aspirin for the pain. She has no drug allergies and has no past medical history of note.

On examination, she is pyrexial with a temperate of 38 °C, and thin. Respiratory, cardiovascular, abdominal, and neurological examinations are unremarkable. A vaginal examination reveals tenderness in the right adnexa.

Investigations reveal the following:

Investigation	Result
Chest X-ray (CXR)	Left upper lobe calcification
Abdominal X-ray (AXR)	NAD
Antinuclear antibody	Negative
Hepatitis B surface antigen	Negative
Sputum: Ziehl–Neelsen (ZN) stain	Negative
High vaginal swab	Pus cells ++; ZN stain and culture pending

What is the most likely diagnosis?

Your answer was incorrect

A	Sarcoidosis
B	Tuberculosis
C	Polyarteritis nodosa
D	Toxic shock syndrome
E	Crohn’s disease

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Tuberculosis

This patient has erythema nodosum, which may affect parts of the body other than the shins. She is from Morocco and so tuberculosis is high on the differential diagnosis. The only other physical finding is the tenderness on vaginal examination, and this pathology in the ovarian tubes suggests a diagnosis of unilateral salpingitis secondary to tuberculosis. This can occur in the absence of respiratory infection or signs, although the apical calcification on CXR raises the possibility of previous pulmonary tuberculosis. She should be treated with a standard anti-tuberculous regimen for 6 months.

E	Crohn’s disease

Crohn’s disease can present with abdominal pain and erythema nodosum, although the signs of previous tuberculosis infection and pus cells on high vaginal swab count more against Crohn’s as the underlying diagnosis.

A	Sarcoidosis

The marked pyrexia and adnexal tenderness are more in keeping with infection rather than an inflammatory process, although sarcoid is of course a recognised cause of erythema nodosum.

C	Polyarteritis nodosa

Polyarteritis nodosa (PAN) is usually associated with gastrointestinal pathology, hepatitis B infection and may be associated with low-level positive ANA (anti-nuclear antibody) titres. Because there is no significant history of bowel disturbance, and hepatitis B is negative, PAN is unlikely.

D	Toxic shock syndrome

Toxic shock syndrome is usually related to a retained tampon, rather than to fallopian tube infection as is hinted at here.

6286

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Difficulty: Average

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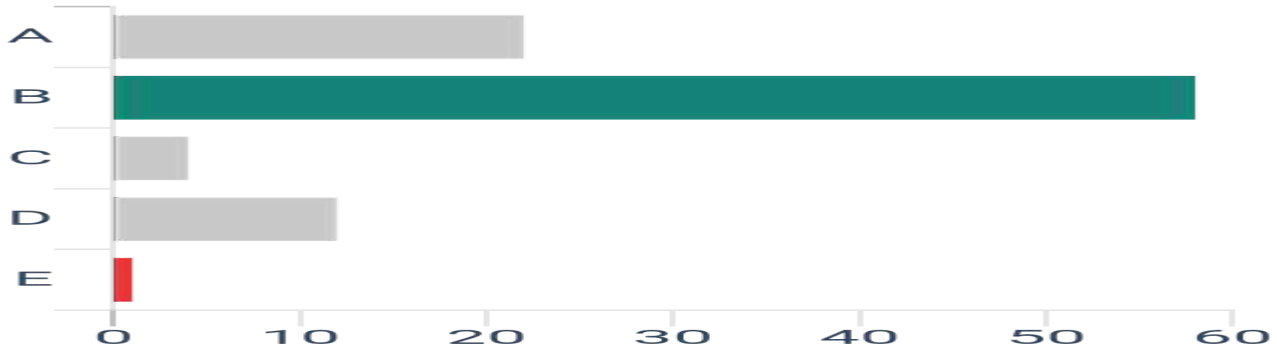

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Responses Correct:	11
Responses Incorrect:	69
Responses Total:	80
Responses - % Correct:	14%

Erythema Nodosum

A 35-year-old man presents to his General Practitioner (GP) with a rash affecting most of his body. It started with dry skin which became tender and, a few hours later, small spots started to appear. He has been feeling unwell with fever, nausea and chills since the onset of these symptoms.

He has a past medical history of psoriasis and depression. He normally uses topical vitamin D therapy to control his psoriasis. This normally affects his elbows, knees and umbilicus.

A photograph of his rash is shown below:

What is the most appropriate management plan?

Your answer was incorrect

A	Arrange for urgent hospital admission
B	Refer for ultraviolet (UV) light therapy
C	Start oral corticosteroids
D	Arrange for outpatient intravenous (IV) antibiotics

E	Start topical treatment with potent corticosteroids and vitamin D

Explanation

A	Arrange for urgent hospital admission

This patient is complaining of rapidly developing systemic symptoms with a new, wide, pustular rash with a background of known psoriasis. The diagnosis is generalised pustular psoriasis. Patients with generalised pustular psoriasis may have history of preceding psoriasis. Triggers can include sudden withdrawal of systemic corticosteroid therapy, or treatment with lithium, aspirin, indomethacin, iodide or beta-blockers. Other possible triggers include infection. The condition is characterised by recurrent acute flares of skin changes:

- The skin first becomes erythematous and tender.
- Pustules appear within hours.
- Pustules coalesce into pools within a day.
- Pustules then peel to leave a smooth surface and a new crop may appear.
- Systemic features include fever, headache, nausea and weakness.

Diagnosis is by skin biopsy which can show subcorneal pustules and neutrophilic infiltration.

Treatment should be in hospital as this is a life-threatening condition. Treatment should be topical with emollients and low-potency steroid creams. Systemic therapy may include antibiotics, cautious use of systemic corticosteroids, and treatment with anti-inflammatory agents such as methotrexate or biologicals.

C	Start oral corticosteroids

Systemic corticosteroids are should only be used with high levels of caution in pustular psoriasis due to the high risk of rebound after completion of treatment. It can be considered as a treatment, but this should be done with monitoring as an inpatient.

B	Refer for ultraviolet (UV) light therapy

UV treatment is appropriate in plaque psoriasis and also in palmoplantar psoriasis. However, it is not appropriate treatment in pustular psoriasis.

D	Arrange for outpatient intravenous (IV) antibiotics

This could be appropriate for patients with severe cellulitis who are systemically well. This patient does not have cellulitis, and the ongoing systemic symptoms and rapidly evolving nature of his symptoms means that he would not be suitable for this therapy.

E	Start topical treatment with potent corticosteroids and vitamin D

This would be first-line treatment for plaque psoriasis and is not appropriate for pustular psoriasis.

71631

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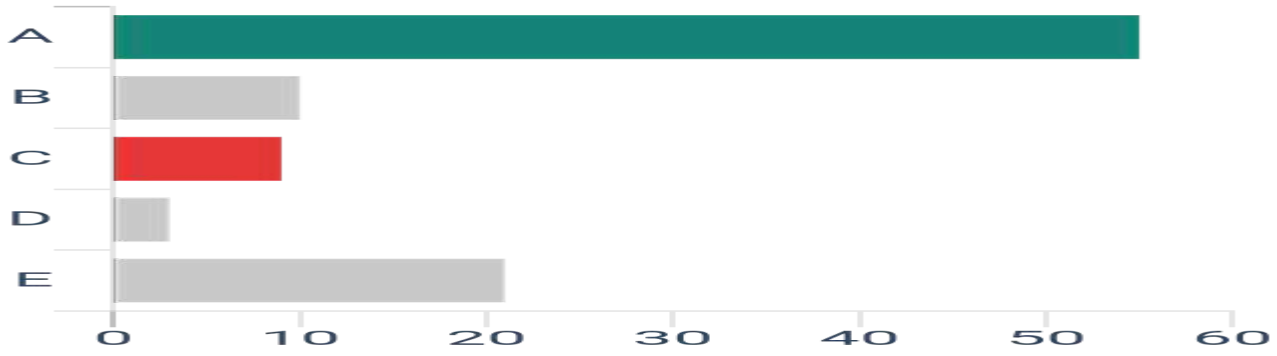
Difficulty: Average

Peer Responses %



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Responses Correct:	11
Responses Incorrect:	70
Responses Total:	81
Responses - % Correct:	14%

Psoriasis

A 23-year-old man presents to the General Medical Clinic with a new, itchy rash. He has no previous medical problems. He has not had any previous skin problems. He denies any intravenous (IV) drug abuse.

A photograph of his skin is shown below:

What is the most appropriate management plan?

Your answer was incorrect

A	Topical ketoconazole
B	Oral terbinafine
C	Topical corticosteroids
D	Topical vitamin D
E	Refer to oncology

Explanation

A	Topical ketoconazole

This patient has a typical rash of tinea corporis. Tinea corporis, commonly known as ringworm, is a dermatophyte fungal infection of the trunk, legs or arms. Different species cause this infection depending on the part of the world the patient is in. Clinically, there may be an acute or chronic rash, spreading from the infected site. The rash is characterised by itchy, inflamed red patches which may be pustular, an oval shape. There are characteristic rings as the rash spreads. Treatment should be with topical antifungal agents in the first instance, and if there is treatment failure then oral antifungal treatment can be considered.

D	Topical vitamin D

Topical vitamin D is used in conjunction with topical corticosteroids for psoriasis. Psoriasis typically presents as plaques of silvery scales on top of a salmon-pink rash.

B	Oral terbinafine

Oral antifungal treatment would be effective, but generally topical treatment should be first-line. Terbinafine and other antifungals can cause liver injury, as well as gastrointestinal upset.

C	Topical corticosteroids

The pattern of this patient's rash is consistent with a fungal infection. Steroid treatment would cause immunosuppression and make the infection worse, causing further spread. Had this been a condition such as eczema or psoriasis, then corticosteroids would have been appropriate. The key differentiating factor is the spreading element of the rash, the ring-like appearance and the location.

E	Refer to oncology

This would have been appropriate for patients with a malignant melanoma. Melanomas are typically pigmented lesions characterised by irregular edge, change in colour, symptoms of bleeding, itching and sensation, as well as ongoing change. In such patients, an urgent two-week referral is warranted.

A 19-year-old woman with a history of severe facial acne resistant to treatment with topical therapies and systemic antibiotics comes to the Dermatology Clinic for review. She has no history of previous psychiatric illness, has read about isotretinoin and would like to start therapy. She is not currently sexually active.

Which of the following is the most appropriate next step?

Your answer was incorrect

A	Advise that the medication is not appropriate for someone of her age
B	Beta human chorionic gonadotropin (HCG) one month pre-therapy and initiate contraception
C	Initiate therapy and contraception
D	Initiate therapy and advise her to use contraception if she becomes sexually active
E	Initiate therapy and advise a pregnancy test if she becomes sexually active

Explanation

B	Beta human chorionic gonadotropin (HCG) one month pre-therapy and initiate contraception

Isotretinoin is a potent teratogen, hence pregnancy must be absolutely avoided in women who are taking it. The medicine is considered contraindicated, unless the terms of a pregnancy prevention programme are met. The fact that she is currently abstinent does not exempt her from this.

E	Initiate therapy and advise a pregnancy test if she becomes sexually active

This option could still potentially expose the fetus to a potent teratogen if she becomes pregnant while on the medication.

A	Advise that the medication is not appropriate for someone of her age

Severe facial acne which has failed to respond to topical therapies and systemic antibiotics is an indication for isotretinoin. However, given it is a potent teratogen, it is imperative that patients adhere to contraceptive methods.

C	Initiate therapy and contraception

It is important for a patient to have a negative pregnancy test and then to have a full month on contraception one month before the initiation of therapy.

D	Initiate therapy and advise her to use contraception if she becomes sexually active

This option could still potentially expose the fetus to a potent teratogen if she was already pregnant at the time of initiating therapy.

38208

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Difficulty: Average

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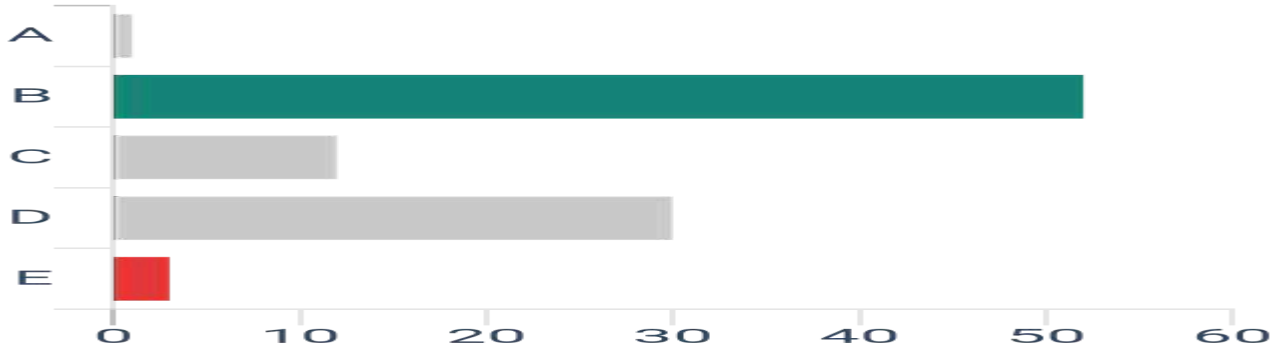

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Responses Correct:	11
Responses Incorrect:	72
Responses Total:	83
Responses - % Correct:	13%

A 21-year-old man presents to the clinic with complaints of a tingling sensation over the lower limbs and seizures for the past year. He gives a history of decreased visual acuity and photophobia since childhood. He also has a history of recurrent respiratory infections and easy bruising following minor trauma.

On examination, there are multiple patches of depigmentation over the face, trunk and limbs, and silvery hair was seen. A peripheral smear reveals an accumulation of large granules in neutrophils.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Angelman syndrome
B	Chediak–Higashi syndrome
C	Elejalde syndrome
D	Griscelli syndrome
E	Hermansky–Pudlak syndrome

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Chediak–Higashi syndrome

The diagnosis of Chediak–Higashi syndrome is supported by the presence of oculocutaneous albinism, a history of bleeding diathesis, recurrent infections, peripheral neuropathy and the presence of giant granules on leukocytes.

E	Hermansky–Pudlak syndrome

Hermansky–Pudlak syndrome presents with oculocutaneous albinism, pulmonary fibrosis and bleeding diathesis, but with no silvery hair, neurological involvement and giant granules.

A	Angelman syndrome

Angelman syndrome usually presents during childhood with craniofacial abnormalities, feeding problems, developmental delay and hypogonadism.

C	Elejalde syndrome

Elejalde syndrome presents with silvery hair, depigmentation with bronze tan on sun exposure and a lack of immunological dysfunction.

D	Griscelli syndrome

Griscelli syndrome shows severe neurological involvement and immunological dysfunction, along with silvery hair, but without giant granules.

72863

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Previous Question

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Difficulty: Average

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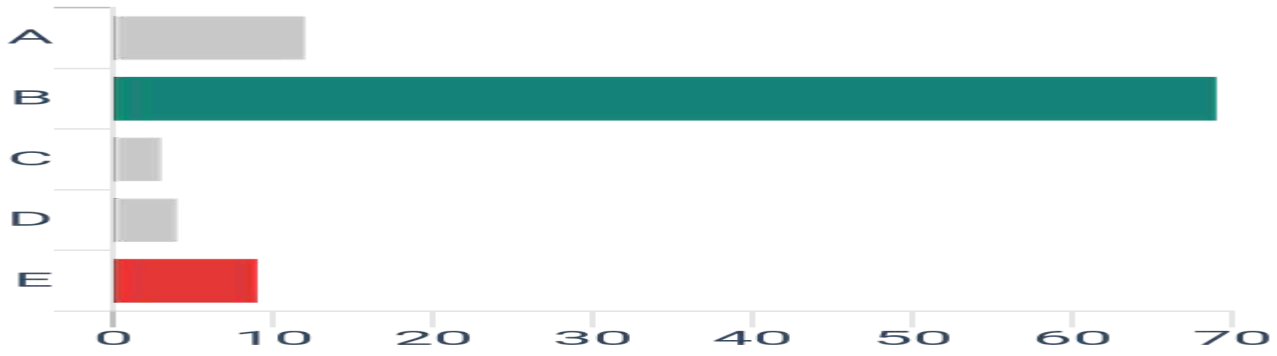

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Session Progress

Responses Correct:	11
Responses Incorrect:	73
Responses Total:	84

A 16-year-old girl presents to the Dermatology Clinic with an itchy rash across her body. She has no history of allergies and has never had a rash like this before. Approximately two weeks ago, she required a course of antibiotics for a sore throat. She is usually fit and well and helps in a children's nursery.

Her rash is examined, as shown below:

Given the likely diagnosis, what is the most appropriate management for this patient?

Your answer was incorrect

A	Narrowband UVB phototherapy
B	PO acitretin
C	PO ciclosporin
D	PO methotrexate

E	Topical hydrocortisone

Explanation

A	Narrowband UVB phototherapy

This patient has a likely diagnosis of guttate psoriasis, given the history of an acute-onset itchy rash that has the appearance of multiple erythematous plaques with silver scale. Often, the lesions can have a teardrop shape to them. Guttate psoriasis is a subtype of psoriasis and can be triggered by a recent streptococcal infection. The patient's history of a recent sore throat requiring antibiotics is a risk factor for guttate psoriasis. Guttate psoriasis responds well to phototherapy, which is often given in acute management of the condition. In contrast, phototherapy is often used later in the management of chronic plaque-type psoriasis.

B	PO acitretin

Acitretin is a systemic retinoid that helps to regulate epithelial cell growth. However, it is a third-line agent that is reserved for those who fail to respond to other treatments. Additionally, retinoids should be prescribed with caution in women of childbearing age – this would need to be taken into consideration for this patient.

C	PO ciclosporin

PO ciclosporin is a disease-modifying agent used as a second-line treatment for psoriasis. It is a potent immunosuppressive agent and generally has good action against psoriasis. Therefore, ciclosporin is generally reserved for emergency presentations, including erythroderma. However, it has considerable side-effects such as nephrotoxicity.

D	PO methotrexate

PO methotrexate is another disease-modifying agent used in the management of psoriasis. It is a dihydrofolate reductase inhibitor that works as an antiproliferative and anti-inflammatory agent. It is often used as a systemic drug of choice in patients with psoriasis and evidence of psoriatic arthropathy. Similarly to ciclosporin, methotrexate should be used with caution in women of childbearing age.

E	Topical hydrocortisone

Topical corticosteroids are frequently used either alone or in combination with vitamin D analogues (eg Dovobet®) in the management of psoriasis, particularly chronic plaque-type psoriasis. Although topical corticosteroids (along with other topical agents such as salicylic acid and coal tar) are common first-line measures to treat psoriasis, guttate psoriasis responds better to light therapy.

Rate this question:

A 29-year-old woman, who is 34 weeks pregnant, presents to the Dermatology Clinic with an erythematous, blistering rash on her upper thigh and abdomen. She has no history of systemic illness and the pregnancy has been unremarkable so far. She has no past medical history of note and took no regular medication before her pregnancy.

On examination, there are multiple small, irregularly shaped blisters over the lower abdomen and the tops of her thighs. Her blood pressure (BP) and temperature are normal.

Investigations reveal the following:

Investigation	Result	Normal value
Haemoglobin (Hb)	109 g/l	115–155 g/l
White cell count (WCC)	5.8×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	190×10^9/l	$150–400 \times 10^9$/l
Sodium (Na^+)	139 mmol/l	135–145 mmol/l
Potassium (K^+)	4.6 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	90 µmol/l	50–120 µmol/l
Erythrocyte sedimentation rate (ESR)	10 mm/hour	1–20 mm/hour

Given the likely dermatological diagnosis, which of the following represents the most appropriate initial treatment for this patient?

Your answer was incorrect

A	Oral prednisolone
B	Acyclovir ointment
C	Corticosteroid ointment
D	Oral antihistamines
E	Intravenous immunoglobulins

Explanation

C	Corticosteroid ointment

The presenting case is consistent with Pemphigoid gestationis (PG), which is a bullous autoimmune, sub-epidermal dermatosis clinically and pathogenetically similar to bullous pemphigoid. It occurs during the third trimester and less commonly in the second trimester or even after delivery. High-potency topical corticosteroids are indicated for localised disease, e.g. her lower abdomen and top of thighs.

B	Acyclovir ointment

This condition is not viral in nature and therefore will not respond to acyclovir.

A	Oral prednisolone

This treatment line is indicated if topical steroids are not controlling the symptoms.

D	Oral antihistamines

This may only help with symptomatic pruritus control rather than treating the autoimmune condition.

E	Intravenous immunoglobulins

This may be indicated only if the patient has severe persistent postpartum pemphigoid gestationis or does not respond to oral corticosteroids/corticosteroids, or these are not suitable (e.g. gestational diabetes).

20631

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Previous Question

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Difficulty: Average

A 22-year-old woman is reviewed annually in the Dermatology Clinic. She has multiple skin-coloured and pink–tan soft papules and nodules on her back and several darker brown large macules on her trunk. There are tiny, freckle-like lesions in both axillae.

Which of the following is most likely to be found on further investigations or further physical examination?

Your answer was incorrect

A	Acoustic neuroma
B	Phaeochromocytoma
C	Lisch nodules
D	Charcot's joints
E	Astrocytoma

Explanation

C	Lisch nodules

This patient has neurofibromas, several café-au-lait macules and axillary freckling. This describes neurofibromatosis type 1 (von Recklinghausen's) chromosome 17. Pigmented harmartomas in the iris (Lisch nodules), which do not occur in NF2, are found in 95% of patients.

E	Astrocytoma

Astrocytomas are seen in NF1, but they are rare.

A	Acoustic neuroma

Acoustic neuroma is not classically described in patients with NF1; although case reports exist of it occurring, bilateral acoustic neuromas are seen in NF2 due to a mutation on chromosome 22.

B	Phaeochromocytoma

Phaeochromocytomas occur in about 5% of patients and optic gliomas, astrocytomas and meningiomas may also occur.

D	Charcot's joints

Spinal nerve root involvement may lead to cord compression, muscle wasting and sensory loss (Charcot's joints), although this is relatively rarely seen and is less likely to occur in a young woman of 22.

9202

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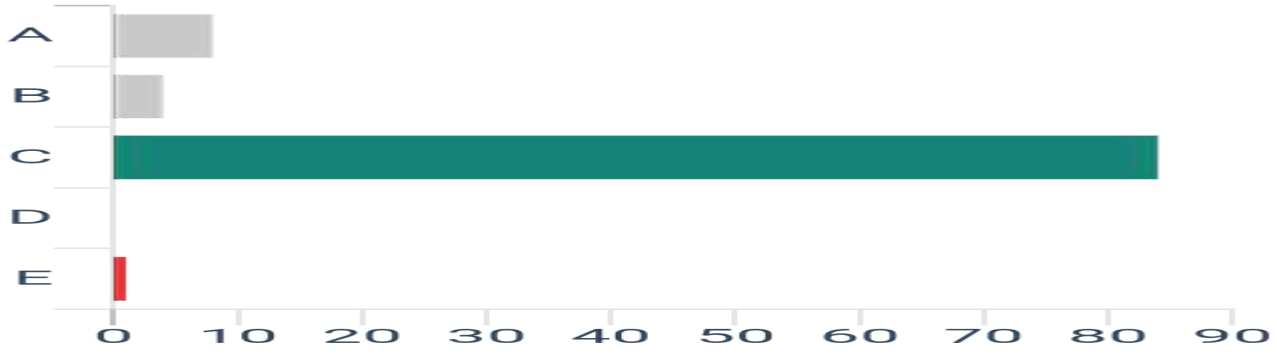
Difficulty: Easy

Peer Responses %



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Responses Correct:	11
Responses Incorrect:	76
Responses Total:	87
Responses - % Correct:	13%

A 26-year-old man presents to the Dermatology Clinic. He complains of severe itching over his elbows (see the image below), lower back and his scalp. He has noticed some weeping lesions on his scalp. When questioned, he also admits to feeling more tired recently.

What is the most likely diagnosis?

Your answer was correct

A	Bullous pemphigoid
B	Scabies
C	Atopic eczema
D	Dermatitis herpetiformis
E	Psoriasis

Explanation

D	Dermatitis herpetiformis

This can present at any age, typically with severe itching. Lesions begin as vesicles. These are quickly excoriated, so the usual finding is of excoriated papules. These can appear anywhere, though the classical distribution is over extensor surfaces such as the elbows and buttocks. The condition is closely linked with coeliac disease. The diagnosis should be confirmed by histology and immunofluorescence (showing IgA deposition) on skin biopsies. Patients should then be investigated for coeliac disease. Treatment is with a strict gluten-free diet. Resistant cases usually respond to dapsone.

A	Bullous pemphigoid

This is an immunobullous disorder which mostly affects the elderly. It presents with tense bullae and associated erosions.

B	Scabies

This is characteristically intensely pruritic, but does not localise to the sites mentioned in the scenario and almost always spares the scalp.

C	Atopic eczema

This is not incompatible with the history and image shown, but one would expect a history of atopy and it classically affects flexural rather than extensor surfaces.

E	Psoriasis

Although the distribution described would fit very well with psoriasis, this gives rise to well-defined, erythematous plaques with prominent overlying silvery scale.

6319

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Previous Question

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Feedback

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Difficulty: Easy

A 40-year-old woman presents to the Emergency Department with a very distressing itch. This started nine months ago after the patient moved to a new house. It has been resistant to both hydrocortisone 1% cream and terbinafine cream given to her by her General Practitioner.

On examination, there are excoriations, crusts and erosions. The patient insists that her new house is ‘infested’ and shows ‘tracks’ on her skin from which she has extracted insects and insect parts, which she brings::

Dr. Jamil Alrajhi

Apr 6, 2025

Given the suspected diagnosis, what is the best next management step?

Your answer was incorrect

A	Two treatments with permethrin cream, one week apart
B	Oral mebendazole
C	Hibiscrub washes and mupirocin nasal ointment for one week
D	Oral risperidone and psychiatry referral
E	Oral fexofenadine

Explanation

D	Oral risperidone and psychiatry referral

The history and image point to a diagnosis of delusional parasitosis, a psychiatric condition where patients acquire a strong delusional belief that they are infested with parasites. Often the imaginary parasites are described as bugs or insects that are crawling on or under the skin. Any marking on the skin, or particle found on the person or his/her clothing, can be interpreted by the patient as evidence of the parasitic infestation. Sufferers commonly compulsively gather such samples and present them to medical professionals. This behaviour of evidence gathering is known as the 'matchbox' sign because matchboxes are often used as the container in which samples are being kept by patients. The diagnosis of delusional parasitosis is supported by the fixed views of infestation, even when presented with strong evidence against it. Atypical antipsychotics such as olanzapine or risperidone are currently used as first-line treatment in addition to input from psychiatric services.

Image source: Image source: https://casereports.bmj.com/content/2014/bcr-2013-202850

B	Oral mebendazole

Mebendazole is used to treat parasitic worm infections such as hookworm, making it inappropriate for this patient.

A	Two treatments with permethrin cream, one week apart

Permethrin cream is used in the treatment of scabies. Patients must also take appropriate measures to eradicate the mite from their clothes and bed linen in order to avoid being re-infected.

C	Hibiscrub washes and mupirocin nasal ointment for one week

The combination of hibiscrub washes and mupirocin nasal ointment is a commonly used treatment against colonisation by *methicillin-resistant Staphylococcus aureus*.

E	Oral fexofenadine

Fexofenadine is a non-sedating antihistamine, commonly used in the treatment of chronic urticaria and allergic rhinitis.

A 62-year-old man present to the Dermatology Clinic with the nail lesion shown below, which is diagnosed as a squamous cell carcinoma of the nail.

Which of the following viruses is most likely to be the cause?

Your answer was incorrect

A	HPV 2
B	HPV 16
C	HPV 4
D	Pox virus
E	Coxsackie B virus

Explanation

B	HPV 16

Case series suggest that HPV16 is the most common papilloma virus subtype responsible for causing periungual squamous cell carcinoma, the diagnosis here. Other high risk cancer HPV subtypes include 18, 31 and 45.

D	Pox virus

Pox viruses are responsible for development of molluscum contagiosum, not for nail related squamous cell carcinoma.

A	HPV 2

HPV 2 is responsible for common and plantar warts, but is less likely to be a cause of squamous cell carcinoma.

C	HPV 4

HPV 4 is the primary cause of plantar warts.

E	Coxsackie B virus

Coxsackie B is a pathogenic enterovirus and is not linked to the development of nail changes.

39078

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Average

A 31-year-old woman attends the Dermatology Clinic with a rash on her hands. She has been feeling generally unwell recently, with a series of colds. She works as an animal handler at the local zoo and is concerned that her occupation has led to her condition.

The rash is erythematous and occasionally blistering, as shown below:

What is the most likely causative organism for her rash?

Your answer was incorrect

A	Cytomegalovirus (CMV)
B	Herpes simplex virus (HSV)
C	Human immunodeficiency virus (HIV)
D	*Mycoplasma pneumoniae*
E	Varicella zoster

Explanation

B	Herpes simplex virus (HSV)

The diagnosis here is Erythema multiforme (EM), with target lesions featured in the image. The question is therefore asking simply for the most common underlying cause of EM, which is usually due to an infection. There is a drug-related cause in around 10% of cases. The most common causative organism for EM is Herpes

simplex virus (HSV); therefore, this is the correct answer. Other causes of EM include *Mycoplasma pneumoniae*, fungal infections and drugs including barbiturates, penicillins, anticonvulsants and non-steroidal anti-inflammatory drugs (NSAIDs).

E	Varicella zoster

While varicella zoster is linked to EM, the most common causative organism is HSV. Therefore, varicella zoster is not the correct answer.

A	Cytomegalovirus (CMV)

While Cytomegalovirus (CMV) can cause EM, the most common causative organism is HSV. Therefore, CMV is not the correct answer.

C	Human immunodeficiency virus (HIV)

While Human immunodeficiency virus (HIV) is linked to EM, the most common causative organism is HSV. Therefore, HIV is not the correct answer.

D	*Mycoplasma pneumoniae*

Mycoplasma is the second most common cause of EM, after HSV. The most common causative organism is HSV; therefore, *Mycoplasma pneumoniae* is not the correct answer.

71765

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Average

A 29-year-old woman presents to the Dermatology Clinic for review. She complains of persistent problems with cracking of the skin at the corners of her mouth. She follows a vegan diet.

The cracking at the corners of her mouth is shown below:

Which of the following is the most likely cause of her skin changes?

Your answer was incorrect

A	Riboflavin
B	Vitamin A
C	Vitamin C
D	Vitamin D
E	Vitamin K

Explanation

A	Riboflavin

Although most vegans are aware of potential vitamin deficiencies and are careful to adequately replace animal sources of B vitamins in their diet, riboflavin (vitamin B_2) deficiency is a possibility and a well-recognised cause of angular stomatitis. Dietary modification with oral supplementation is the most appropriate intervention.

E	Vitamin K

Vitamin K deficiency in adults is rare, as it is ubiquitous in green vegetables. It may occasionally result from malabsorption of fat and can lead to easy bruising and an increased risk of bleeding.

B	Vitamin A

Vitamin A deficiency leads to impaired dark adaptation of vision and dry, scaling skin, which can lead to permanent corneal scarring (keratomalacia) and increased risk of respiratory infection.

C	Vitamin C

Vitamin C deficiency results in the development of scurvy, with follicular keratosis, coiling of hair and perifollicular haemorrhages. There is also an increased risk of lower limb haemorrhage.

D	Vitamin D

Vitamin D deficiency results in the development of osteomalacia, which is manifest in long bone pain and proximal muscle weakness. It is more common in individuals who follow a vegetarian diet.

A 25-year-old man presents to his General Practitioner (GP) with a three year history of red, itchy nodules on his left shoulder. He had a previous history of acne vulgaris. He is concerned about the appearance of the lesions.

What is the most appropriate next management step?

Your answer was correct

A	Biopsy one of the lesions
B	Oral antihistamine
C	Intra-lesional triamcinolone
D	Topical steroid creams
E	Reassurance they will resolve over time

Explanation

C	Intra-lesional triamcinolone

The lesions in the photograph are keloid scars, secondary to acne. From the options given, only intra-lesional corticosteroids are likely to drive resolution of the lesions, although there are risks of local bleeding, infection and skin atrophy.

A	Biopsy one of the lesions

A biopsy is not necessary to confirm the diagnosis, and may worsen any scarring.

B	Oral antihistamine

Although oral antihistamines may reduce itching local irritation, they won't impact on the cosmetic appearance of the lesions.

D	Topical steroid creams

Topical steroid creams only poorly penetrate overlying scarring from the acne.

E	Reassurance they will resolve over time

There is evidence of permanent scarring from the previous acne, which won't resolve over time.

39071

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Previous Question

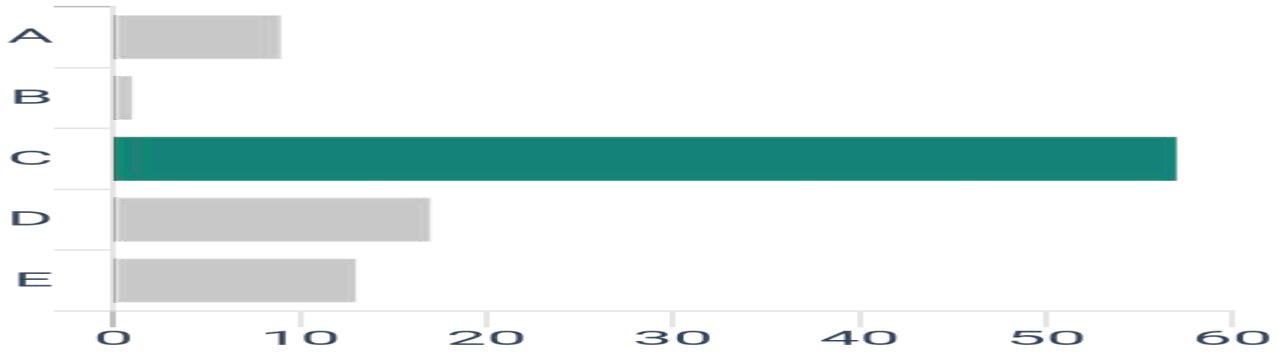
Tag Question

Feedback

End Session

Difficulty: Average

Peer Responses %



A 62-year-old woman presents to the General Medical Clinic as she has noticed itchiness of her scalp. She has previously had eczema as a child but has not suffered from any dermatological problems in adulthood. She has previously had a wide local excision for breast cancer and has maintained remission. She has never smoked.

A photograph of her scalp is shown below:

What is the most appropriate treatment?

Your answer was incorrect

A	Coal-tar-based shampoo
B	Salicylic-acid-based shampoo
C	Oral corticosteroids
D	Potent topical corticosteroids
E	Oral griseofulvin

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

D	Potent topical corticosteroids

This patient has scalp psoriasis. This is seen as a salmon-pink rash with silvery scales which is usually itchy in nature. Treatment advised by NICE is to first try topical high-potency corticosteroids. Second-line treatment is with topical vitamin D therapy.

B	Salicylic-acid-based shampoo

Salicylic acid is a keratolytic therapy. It can be used to reduce thick scales to allow other treatments to reach the scalp. In the absence of multiple thick scales, it should not be used. It is also not of use as monotherapy.

A	Coal-tar-based shampoo

The National Institute for Health and Care Excellence (NICE) has advised that coal-tar-based shampoos should not be used alone for severe cases.

C	Oral corticosteroids

Oral corticosteroids should be avoided in psoriasis. This is because systemic therapy tends to cause rebound psoriasis.

E	Oral griseofulvin

Oral griseofulvin is effective for fungal infections of the scalp such as tinea capitis. These infections show dry scaling with black dots and smooth areas of hair loss. The clinical picture does not match this description.

71630

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Difficult

An 18-year-old woman presents to the Dermatology Clinic with a weepy, itchy flexural rash. She has been using potent topical steroids for six months, without much benefit.

She thinks she may be allergic to her washing powder. The itching is keeping her awake at night.

What is the most appropriate next management step?

Your answer was incorrect

A	Oral Prednisolone
B	Topical calcineurin inhibitors
C	Skin prick testing
D	Counselling to help break the scratch itch cycle

E	Topical Calcipotriol

Explanation

B	Topical calcineurin inhibitors

Topical calcineurin inhibitors e.g. tacrolimus/pimecrolimus are often used as a steroid alternative, when steroids have stopped working (often due to steroid resistance). They should not be used in pregnancy because of systemic toxicity shown in patients receiving them by the oral route.

E	Topical Calcipotriol

Calcipotriol is a standard therapy for the treatment of psoriasis, not for eczema.

A	Oral Prednisolone

Given the efficacy of steroid sparing topical therapies such as tacrolimus, the benefit risk profile of oral prednisolone versus other options is not considered positive.

C	Skin prick testing

Skin prick testing is not usually helpful in identifying a precipitating allergen in atopic eczema.

D	Counselling to help break the scratch itch cycle

Counselling alone is very unlikely to improve this patients' severe atopic eczema.

39084

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Difficult

This 31-year-old man presents to the Dermatology Clinic with asymptomatic lesions on his knees, noticed by his General Practitioner (GP) while doing a knee exam for knee pain. They are occasionally itchy. They are also present on his chest, elbows and buttocks.

He suffered an episode of acute pancreatitis which occurred whilst he lived in Kenya, which was put down to excess alcohol consumption.

What is the most likely diagnosis for these lesions?

Your answer was incorrect

A	Xanthelasma palpebrum
B	Tuberous xanthomas
C	Tendinous xanthomas
D	Eruptive xanthomas
E	Xanthoma disseminatum

Explanation

D	Eruptive xanthomas

Eruptive xanthomas appear on extensor surfaces as crops of small red-yellow papules, and are associated with hypertriglyceridaemia, a potential cause of acute pancreatitis.

A	Xanthelasma palpebrum

These are common, and exist as soft, yellow flattened lipid plaques over the eyelids, and are associated with mixed hyperlipidaemia.

B	Tuberous xanthomas

Tuberous xanthomas are associated with elevated LDL cholesterol and mixed dyslipidaemia. They are firm painless nodules which occur over pressure areas.

C	Tendinous xanthomas

Tendon xanthomas are slowly enlarging subcutaneous nodules over tendons, and are associated with familial hypercholesterolaemia.

E	Xanthoma disseminatum

Xanthoma disseminatum is associated with hundreds of small yellow-brown papules due to a rare form of histiocytosis, not due to abnormalities in lipid metabolism.

39080

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Average

You are asked to review a 70-year-old man on haemodialysis for tubular-interstitial nephritis. He has had a failed renal transplant.

Six months ago, he had an magnetic resonance imaging (MRI) scan with contrast for back pain. He presents with a three month history of ‘woody’ skin around the abdomen and distal limbs'. His umbilicus has become inverted and smaller. He denies having any difficulty swallowing, shortness of breath, or other systemic symptoms.

On palpation of his skin, it has lost its elasticity and is hard.

What is the most likely diagnosis?

Your answer was incorrect

A	Plaque morphoea
B	Systemic sclerosis
C	Intra-abdominal carcinomatosis
D	Pre-tibial myxoedema
E	Nephrogenic systemic sclerosis

Explanation

E	Nephrogenic systemic sclerosis

Nephrogenic systemic sclerosis is a devastating cutaneous dermopathy, seen in patients with chronic kidney disease who have been exposed to gadolinium-based contrast agents seen in MRI. The skin becomes wood-like and hard.

C	Intra-abdominal carcinomatosis

Intra-abdominal carcinomatosis would be associated with the progressive development of ascites and abdominal distension.

A	Plaque morphoea

Plaque morphoea is asymmetrical and involves the skin only, and usually doesn't progress as rapidly as the picture seen here.

B	Systemic sclerosis

In systemic sclerosis, nail changes, calcinosis of the fingers and telangiectasia would be expected.

D	Pre-tibial myxoedema

Pre-tibial myxoedema is characterised by infiltration of the skin over the shins, and is associated with positive thyroid antibodies and Graves' disease.

38526

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Average

A 32-year-old man presents to his General Practitioner (GP) with polyuria and malaise. He also complains of a three week history of an erythematous rash in the groin as shown below, which appears to be getting worse.

Dr. Jamil Alrajhi

Apr 6, 2025

He tells you he has had it intermittently for years but he feels each time he gets it the symptoms are worse. It is very itchy and he is complaining of dysuria. He denies urethral discharge or irritation. He has a regular girlfriend. He is a non-smoker and drinks very little alcohol.

Which of the following investigations would be most useful in assessing why he is susceptible to infection?

Your answer was correct

A	Syphilis serology
B	Urine dipstick
C	Serum fasting glucose
D	Urethral swab
E	Skin biopsy

Explanation

C	Serum fasting glucose

This gentleman's symptoms are suggestive of diabetes, and *Candida albicans* infections are common in diabetics. A serum fasting glucose of >7 or single random plasma glucose of >11.1 can confirm the diagnosis of diabetes in symptomatic patients. Furthermore, HBA1c can be a diagnostic test; a cut-off point of HBA1c 6.5% (48 mmol/mol) is recommended for diagnosing type 2, but it is not suitable for the diagnosis of suspected type 1 diabetes, which is more likely in this case.

This gentleman has intertrigo. *Candida* skin infections usually present with soreness and itching and are caused by *Candida* species.

Risk factors for mucocutaneous candidiasis are:

- Pregnancy or high-oestrogen contraceptive pill
- Iron deficiency
- Underlying skin disease, e.g. psoriasis, dermatitis
- General debility, e.g. cancer or malnutrition
- Local factors: heat, moisture, skin maceration, topical corticosteroids, poor dental care
- Extremes of age
- Immunocompromised patients, e.g. HIV, chemotherapy, corticosteroid treatment, Cushing's disease
- Diabetes mellitus.

General management of *Candida* skin infections includes the following: avoiding occlusion of skin, avoiding obesity, keeping skin dry, washing with emollients as soap substitutes and drying thoroughly after washing.

First-line treatment is usually a topical imidazole cream, e.g. clotrimazole, econazole, ketoconazole or miconazole.

If there is problematic itch or inflammation, consider adding a mild corticosteroid cream for 7-14 days.

Oral fluconazole 50 mg/day for 2-4 weeks if: topical treatment is ineffective or there is widespread infection or if the patient is immunocompromised (depending on the severity of infection and the level of immunocompromise). Review after 2 weeks of fluconazole treatment.

Reference: Eyerich K, Eyerich S, Hiller J, et al; Chronic mucocutaneous candidiasis, from bench to bedside. *Eur J Dermatol*. 2010 May/Jun 20(3):260-265. Epub 2010 Feb 5.

A	Syphilis serology

The rash is not suggestive of syphilis, which can present as a painless genital ulcer or a diffuse macular/popular rash involving the whole trunk and extremities.

B	Urine dipstick

Urine dipstick may confirm glycosuria but will not confirm the diagnosis of diabetes mellitus.

D	Urethral swab

If the skin breaks down, this can be associated with dysuria in the absence of a urinary tract infection. There is also no indication that there is any urethral pus.

E	Skin biopsy

Candida albicans (thrush) is usually a clinical diagnosis and does not require skin biopsies.

33381

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Next Question

Previous Question

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Feedback

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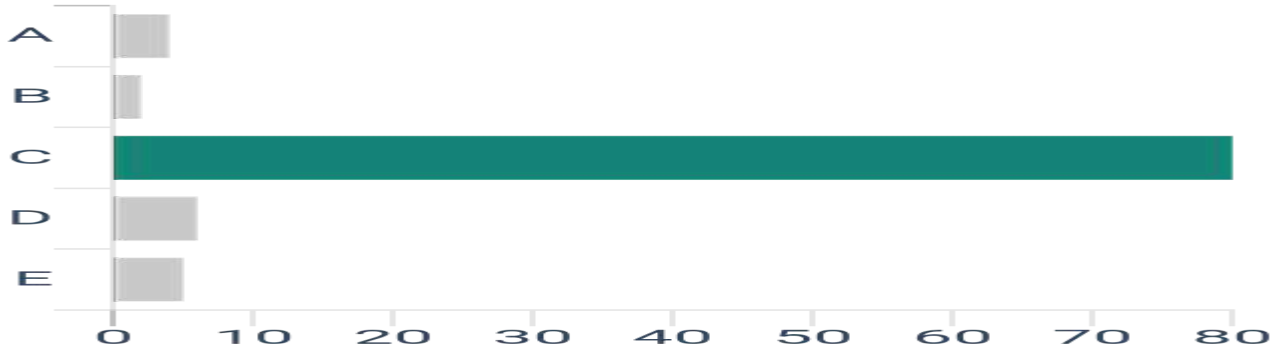
Difficulty: Easy

Peer Responses %



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Responses Correct:	14
Responses Incorrect:	84
Responses Total:	98
Responses - % Correct:	14%

A 32-year-old Nigerian man presents to his General Practitioner (GP) with the intensely itchy rash on his neck, shown in the photograph below. He has similar lesions on the trunk and small, hyperpigmented papules on his forearms and wrists.

He gives a six month history of these lesions and recently he returned from a trip to Nigeria. He feels well in himself otherwise. He remembers having tuberculosis as a child and was treated for it in Nigeria.

What is the most likely diagnosis?

Your answer was incorrect

A	Nodular prurigo
B	Cutaneous tuberculosis infection
C	Lichen planus
D	Kaposi's sarcoma
E	Keloid scars

Explanation

C	Lichen planus

Classical lichen planus is characterised by itchy, violaceous, polygonal, flat-topped papules most commonly developing over the wrists and ankles. A pale, lacy network is often found in the mouth, though this may be asymptomatic. The presence of Wickham's striae – a fine, white lacy pattern over the papules – is characteristic. The Koebner phenomenon is typically seen in lichen planus (whereby the rash 'colonises' sites of trauma a few days later). Lichen planus has been associated with liver disease including hepatitis C, primary biliary cholangitis and chronic active hepatitis. It usually resolves in 6–18 months. It often responds to potent or very potent topical steroid, but some patients will require oral prednisolone. Lesions tend to resolve to leave deep post-inflammatory hyperpigmentation, especially in darker skin-types.

The hypopigmentation seen in this case is attributable to scratching.

E	Keloid scars

Although spontaneous keloids are recognised, the eruption here is too widespread for this and involves sites such as the wrists, where keloids would be most unexpected. Keloids usually have a smooth surface and form nodules or very thickened plaques. Associated itching is not usually severe.

A	Nodular prurigo

This condition is sometimes associated with underlying eczema. Like lichen planus, it is intensely itchy. Nodular lesions are found most commonly on the legs but can occur anywhere on the body. The lesions on the image are plaques rather than nodules; papules on the wrists are often seen in lichen planus.

B	Cutaneous tuberculosis infection

There are various possible manifestations of tuberculosis infection in the skin, but none would be expected to be intensely pruritic.

D	Kaposi's sarcoma

This presents with red, purple or brown cutaneous nodules or plaques, which are usually asymptomatic.

A 37-year-old woman presents to the Dermatology Clinic with hair loss, distributed on the front and crown of her scalp but sparing the sides.

She denied using braids, straighteners, tongs or wearing a ponytail.

She had no other significant medical problems.

How would you best describe this type of alopecia?

Your answer was incorrect

A	Cicatricial alopecia
B	Androgenetic alopecia
C	Telogen effluvium
D	Traction alopecia
E	Alopecia areata

Explanation

B	Androgenetic alopecia

Hair loss in this pattern in females may be associated with increased androgens, for example in a patient with polycystic ovarian syndrome, (PCOS). It results in gradual, diffuse thinning over the crown and frontal scalp. A rim of hair is preserved along the frontal margin (in males, this may not be maintained), back and sides of the scalp. (Occipital follicles are not dependent on androgens and are a source for hair transplant.)

C	Telogen effluvium

Telogen effluvium occurs because of sudden entry of hair follicles into the resting phase, resulting in increased hair loss. It is usually associated with acute illness.

A	Cicatricial alopecia

In cicatricial (scarring) alopecia, one would expect to see erythema, scaling, pustules and hyperkeratosis as well as fibrosis.

D	Traction alopecia

Traction alopecia occurs when hair is styled by tightly pulling it back, for example into a pony tail.

E	Alopecia areata

Alopecia areata is autoimmune in origin and results in localised non-scarring alopecia.

A 64-year-old woman who has type II diabetes is reviewed on the ward round. She was admitted with cellulitis of the left lower leg some three days earlier. Although her temperature was 38.9 °C on admission, it has now fallen steadily in response to intravenous (IV) co-amoxiclav. The area of cellulitis has reduced in size from a border above her left knee to the mid shin. The erythema has also significantly improved. Her blood culture results are back and there is coagulase-negative staphylococci identified in one bottle, sensitive to vancomycin.

Which of the following is the most appropriate next step?

Your answer was incorrect

A	Add Vancomycin
B	Continue Co-amoxiclav
C	Switch to Flucloxacillin
D	Switch to Linezolid
E	Switch to Vancomycin

Explanation

B	Continue Co-amoxiclav

Coagulase-negative staphylococci are one of the most frequently identified bacteria of the normal skin flora. In this situation, with a significant improvement in the clinical picture, the most likely explanation is that the blood culture results are due to contamination. As such, there is no reason to discontinue co-amoxiclav and replace with an anti-staphylococcal agent or to add one to co-amoxiclav. Given her symptoms have significantly improved, she could be switched potentially to oral co-amoxiclav and discharge planning commenced.

E	Switch to Vancomycin

There is no indication to switch to vancomycin here. It has a narrow spectrum of action and is not warranted here, given that overall symptoms of infection are improving.

A	Add Vancomycin

Given this patient is improving, coagulase-negative staphylococci may be a skin contaminant. As such, no change to antibiotic prescribing is needed. iv vancomycin is used for serious staphylococcal infections and in patients with meticillin-resistant *Staphylococcus aureus* (MRSA).

C	Switch to Flucloxacillin

Flucloxacillin is rarely an appropriate intervention for bacterial skin infections in diabetes mellitus because of mixed bacterial growth being responsible in the majority of cases. Given the patient's improvement, there is no value in switching therapy.

D	Switch to Linezolid

Linezolid has good tissue penetration and activity against staphylococcal infection. It is of particular value in resistant staphylococcal infection. Here, with improved symptoms overall, it is not required.

39362

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Next Question

Previous Question

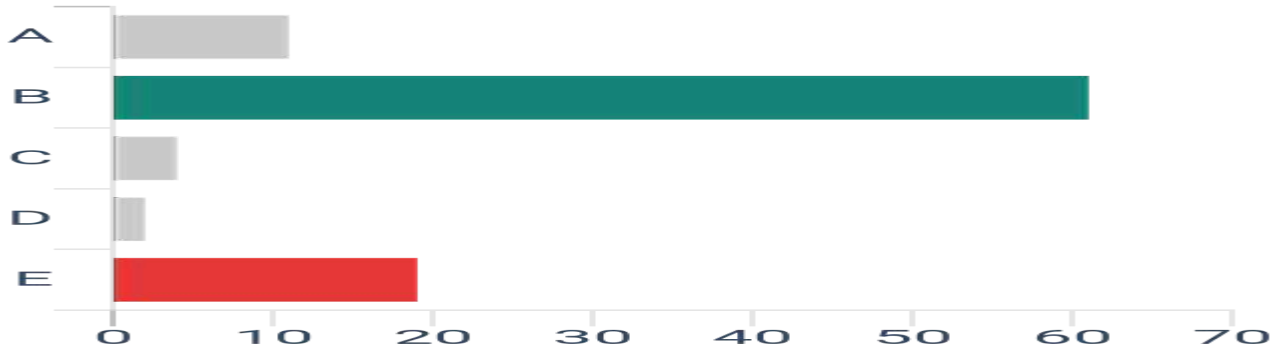
Tag Question

Feedback

End Session

Difficulty: Average

Peer Responses %



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Responses Correct:

14

A 55-year-old woman comes to the Emergency Department (ED) for review. She has cellulitis affecting her left lower leg and says that the area of redness has spread up her leg over the past 24 hours.

On examination, she is pyrexial (38 °C), while her blood pressure (BP) is 155/82 mmHg. Her pulse is 85 beats per minute (bpm) and regular. There is erythema over the foot and to the mid-shin on the left leg, with popliteal and inguinal lymphadenopathy. Her body mass index (BMI) is 32 kg/m^2.

Investigations reveal the following:

Investigation	Result	Normal values
Haemoglobin (Hb)	129 g/l	135–175 g/l
White cell count (WCC)	13.1 × 10^9/l	4.0–11.0 × 10^9/l
Platelets (PLT)	207 × 10^9/l	150–400 × 10^9/l
Sodium (Na^+)	137 mmol/l	135–145 mmol/l
Potassium (K^+)	4.2 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	102 µmol/l	50–120 µmol/l
Fasting glucose	4.9 mmol/l	< 5.6 mmol/l

Which of the following is the most appropriate antibiotic therapy?

Your answer was incorrect

A	Ciprofloxacin
B	Co-amoxiclav
C	Doxycycline
D	Erythromycin
E	Flucloxacillin

Explanation

E	Flucloxacillin

Guidelines recommend the use of flucloxacillin in the first instance for uncomplicated cellulitis, in this patient who is non-diabetic.

B	Co-amoxiclav

Co-amoxiclav is the recommended first-line option in cellulitis related to bite injury because of activity against common oral bacteria, and is the default choice in many guidelines for the treatment of cellulitis against a background of diabetes mellitus.

A	Ciprofloxacin

Ciprofloxacin may be added if there is exposure to freshwater at the time of infection because of the risk of infection with organisms such as *Pseudomonas*. However, quinolone treatment is no longer recommended wherever an effective alternative is available due to a small but significant risk of debilitating adverse effects.

C	Doxycycline

Doxycycline is considered an option for cellulitis where there is significant exposure to salt water.

D	Erythromycin

Macrolides such as erythromycin are the optimal intervention for patients with cellulitis who are allergic to flucloxacillin.

34148

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Easy

A 45-year-old man has a long-standing rash. He thought it had cleared up, but it has recurred in a recent scar from minor surgery.

Which of the following conditions exhibits this phenomenon?

Your answer was incorrect

A	Eczema
B	Sarcoid
C	Lichen planus
D	Pemphigoid
E	Acne

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

C	Lichen planus

The appearance of a rash in a scar or in the site of an injury is known as Koebner's phenomenon. The Koebner reaction usually appears around 7–14 days after the injury. Skin disorders that show this reaction include psoriasis, lichen planus and vitiligo. The Koebner response occurs in up to 20% of patients with psoriasis. The term pseudo-Koebner is used for conditions such as molluscum contagiosum and viral warts, where the phenomenon arises from the spread of an infective agent. The reverse Koebner phenomenon also exists where trauma to a lesion results in it resolving.

E	Acne

Acne does not exhibit the Koebner phenomenon, although in individuals prone to acne, application of surgical dressings may lead to development of new lesions underneath where the dressing has been.

A	Eczema

Eczema doesn't exhibit the Koebner phenomenon, and occurs predominantly as an erythematous rash on flexural surfaces.

B	Sarcoid

Sarcoidosis is associated with erythema nodosum, which is seen on the shins and isn't related to local injury.

D	Pemphigoid

Bullous pemphigoid is an autoimmune skin condition where tense bullae occur, predominantly on areas where skin-to-skin contact may occur such as the upper thighs or the inside of the upper arms.

33392

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Next Question

Previous Question

Tag Question

Feedback

End Session

Difficulty: Easy

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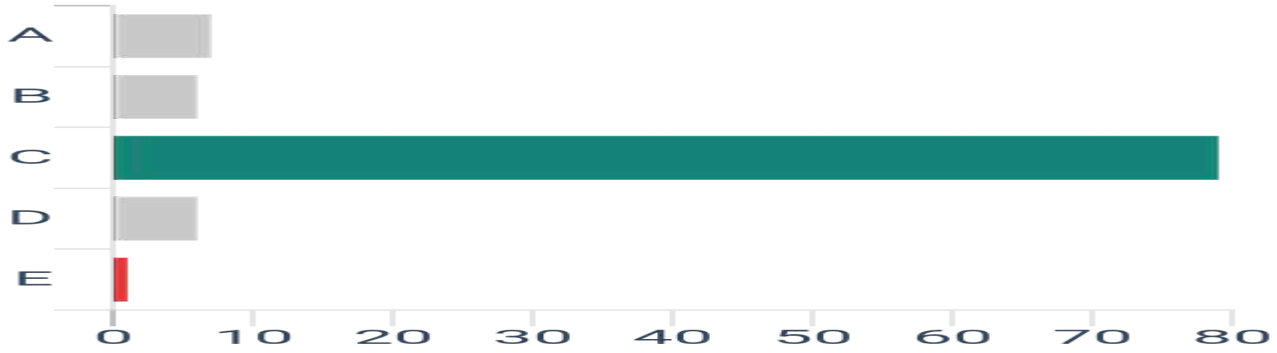

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Session Progress

Responses Correct:	14
Responses Incorrect:	89
Responses Total:	103
Responses - % Correct:	14%

This 48-year-old woman presents to the Dermatology Clinic with the rash shown below. She has had it for many years, been too embarrassed to come to the doctors and has never shown her skin to anyone, except her GP.

She has been using topical creams including Calcipotriol and topical steroids. She has a history of breast cancer, in remission, type II diabetes and chronic kidney disease stage 3 (CKDIII).

What would be the next most appropriate management step?

Your answer was incorrect

A	Ciclosporin
B	Methotrexate
C	Narrow band UVB
D	Skin biopsy
E	Skin swab for microscopy, culture and sensitivity

Explanation

C	Narrow band UVB

Narrow band UVB (phototherapy) is the most commonlyused second line treatment for psoriasis, after topical treatment, providing there is no past history of skin cancer. It carries less liability than systemic treatments given this patient's past medical history and is therefore the preferred next therapy choice.

D	Skin biopsy

The rash is entirely consistent with psoriasis. As such moving to biopsy risks scarring without adding significantly to the underlying diagnosis.

A	Ciclosporin

Cyclosporine is an anti-T cell immunosuppressive which can accumulate in renal impairment. Given the history of both cancer and chronic renal impairment, it is best avoided here.

B	Methotrexate

Methotrexate interferes with DNA synthesis, as such, like cyclosporine, use in a patient with a past history of cancer should be avoided if possible.

E	Skin swab for microscopy, culture and sensitivity

The image is of typical psoriatic plaques, as such there is no value in MCS in the management of this case.

39075

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Next Question

Previous Question

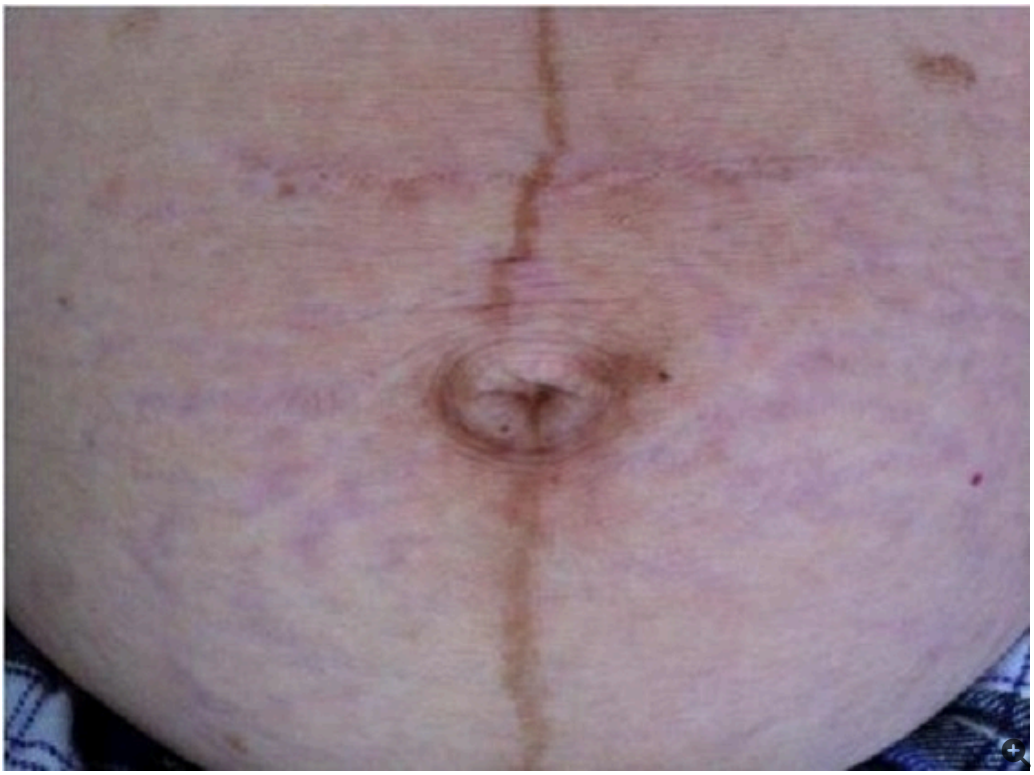
Tag Question

Feedback

End Session

Difficulty: Difficult

A 30-year-old woman, in her third trimester of pregnancy, presents to the Dermatology Clinic with an intensely itchy rash that is keeping her awake at night. The rash started in the stretch marks of her abdomen and is spreading across her buttocks and thighs.



What is the most likely diagnosis?

Your answer was incorrect

A	Scabies
B	Polymorphic Eruption of Pregnancy
C	Chronic spontaneous urticaria
D	Lichen planus
E	Eczema

Explanation

B	Polymorphic Eruption of Pregnancy

Polymorphic Eruption of Pregnancy also known as Pruritic Urticarial Papules and Plaques of Pregnancy (PUPPP) is an itchy eruption that starts in the last 3 months of pregnancy and clears with delivery. It consists of small, pink papules that appear in the stretch marks around the umbilicus. These papules coalesce to form urticarial patches which can spread to involve the buttocks and thighs.

E	Eczema

Eczema is a chronic pruritic condition with characteristic skin changes (inflamed, red, and sometimes weepy patches) that occurs due to a complex interaction between genetic and environmental factors. It usually begins in infancy, but may also occur at any age.

A	Scabies

Scabies is an itchy skin condition that occurs due to infection with the mite *Sarcoptes scabiei* following prolonged physical contact with an infected person. Scabies is diagnosed clinically due to the presence of burrows, often in typical areas such as the wrists and interdigital spaces of the hands. Treatment is with application of topical permethrin cream.

C	Chronic spontaneous urticaria

Chronic spontaneous urticaria refers to the idiopathic condition where urticarial lesions or angioedema occur in an individual without any inducible cause. Urticaria is usually intensely itchy and may last from a few minutes to 24 hours. The mainstay of treatment is with combinations of oral antihistamines.

D	Lichen planus

Lichen planus is a chronic inflammatory condition of unknown aetiology that typically appears as violaceous plaques with fine, white, lace-like lines (Wickham's striae).

A 45-year-old man presents to the Dermatology Clinic with a 3-month history of an exquisitely painful ulcer on his right shin. This started after an insect bite and rapidly developed into an ulcer. He denies fever but says that the ulcer has been enlarging in size. He has a background of inflammatory bowel disease that is well controlled, with no recent flares. While waiting for his referral, his General Practitioner prescribed a course of topical steroids with limited effect. The other leg is entirely normal.

His right leg is examined, as shown below:

Which of the following initial treatments is most appropriate?

Your answer was incorrect

A	High-dose oral prednisolone
B	Infliximab
C	Oral cyclosporine
D	Silver nitrate dressing
E	Topical tacrolimus

Explanation

E	Topical tacrolimus

This patient has pyoderma gangrenosum (PG) associated with inflammatory bowel disease. The limited disease is typically treated with topical therapies initially to avoid systemic side effects. Following a course of topical steroids, as here, topical calcineurin inhibitors, such as tacrolimus, can result in the resolution of limited PG in up to 50% of patients. It is, therefore, an appropriate second-line option for therapy of limited PG.

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A	High-dose oral prednisolone

Systemic corticosteroids are an option for patients with more extensive disease, at daily doses of between 0.5 and 1.5 mg/kg. The risk–benefit profile of systemic corticosteroids means that topical therapies are the usual preferred initial option.

B	Infliximab

Infliximab is an effective biological option for patients who fail to respond to systemic corticosteroids and conventional treatment such as ciclosporin.

C	Oral cyclosporine

Systemic ciclosporin is used as an adjunct to oral corticosteroids in patients who fail to gain an adequate response to therapy.

D	Silver nitrate dressing

Due to the phenomenon of pathergy, use of dressings that may adhere to the area of inflammation, such as silver nitrate, should be avoided.

A 27-year-old African-American man presents to the Dermatology Clinic for review. He has a disfiguring scar over his upper abdomen, following a laparotomy six months ago. The scar is causing him to be severely depressed, and he is currently managed with counselling and antidepressants.

An image of the scar is shown below:

Which of the following is the most appropriate initial intervention?

Your answer was correct

A	Cryotherapy
B	Intralesional triamcinolone
C	Intralesional 5-fluorouracil (5-FU)
D	Surgical excision
E	Targeted radiotherapy

Explanation

B	Intralesional triamcinolone

This patient has an extensive keloid scar on his upper abdomen. These are said to occur in up to 16% of patients of African descent. Intralesional steroids flatten and soften the keloid scar and have response rates of > 50%. Where patients fail to respond, other options include 5-FU, and surgery combined with steroid therapy.

A	Cryotherapy

Cryotherapy may be used for keloid scars which do not respond to corticosteroids, either alone or in combination. Direct delivery of liquid nitrogen to the scar itself has improved the effectiveness of cryotherapy, and it is now used earlier in the management of keloid tissue.

C	Intralesional 5-fluorouracil (5-FU)

Intralesional 5-FU is a second-line medical option for patients who fail to respond to intralesional steroids.

D	Surgical excision

Patients who have suffered a keloid scar are much more likely to endure a second episode. Hence surgery is a later treatment option in patients who fail to respond to medical therapy and is combined with steroids in most patients.

E	Targeted radiotherapy

Targeted radiotherapy is effective in reducing keloiding, but in a young man, there is concern about its ability to lead to the development of local skin tumours. It is usually reserved for patients who have undergone surgery for an underlying cancer.

71649

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Previous Question

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Feedback

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Difficulty: Easy

A 53-year-old Caucassian man, who previously lived in Australia, is referred to the Dermatology Clinic with a large naevus on his back that has been getting darker in colour. He mentions that his brother was recently diagnosed with a malignant melanoma.

Subsequent excision and histology confirms a diagnosis of malignant melanoma with a Breslow thickness of 4 mm. He wishes to know what his prognosis might be.

What is the one feature that will most affect his prognosis?

Your answer was incorrect

A	Family history of melanoma
B	Location of melanoma on the back
C	Thickness of melanoma at excision
D	Previous marked sun exposure
E	Change in colour

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

C	Thickness of melanoma at excision

The thickness of the melanoma, or Breslow thickness, is the single most important prognostic feature and impacts significantly on management decisions.

Eight-year survival rates for melanoma based on tumour thickness are as follows:

< 0.76 mm	93%
0.76–1.69 mm	85%
1.70–3.60 mm	60%
> 3.60 mm	33%

E	Change in colour

In order to aid in the diagnosis of melanomas, the ABCDE rule is commonly used. Features that indicate the presence of a melanoma include: Asymmetric shape, Border irregularity, Colour (more than one), Diameter (> 6 mm), and Evolution. The darkening colour of this man's lesion indicates the need for excision, but does not have any impact on prognosis.

A	Family history of melanoma

A family history of melanoma is a well recognised risk factor for developing melanoma; however, it does not affect the prognosis once the disease is established.

B	Location of melanoma on the back

In males, the back is the most common area to develop a melanoma, while in women the legs are most commonly affected. The location does not, however, affect prognosis.

D	Previous marked sun exposure

By having lived in Australia, this man has a history of marked sun exposure, which is a well-recognised risk factor for developing melanoma. However, it does not affect the prognosis once the disease is established.

8554

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Difficulty: Easy

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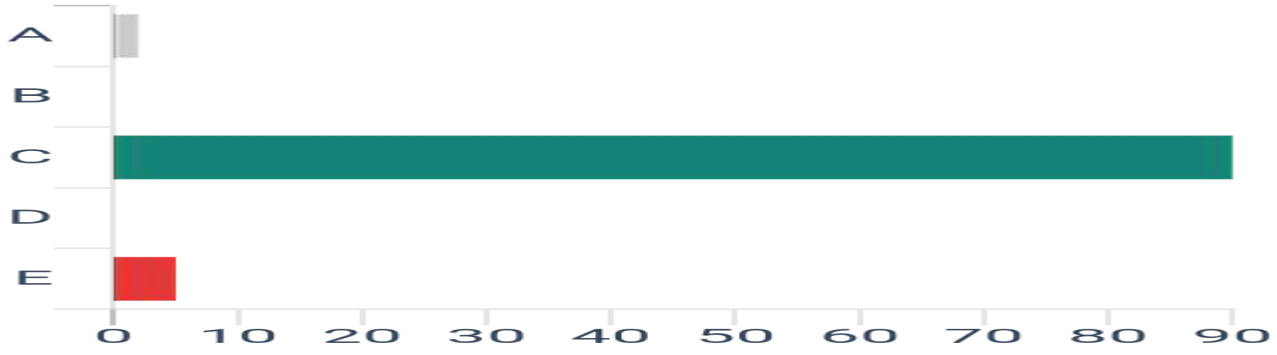

A 79-year-old woman presents to her General Practitioner (GP) with a six week history of a widespread itchy rash.

An image of the rash is shown below:

It mainly affects the forearms and hands, but there are similar ill-defined, erythematous lesions on the trunk, particularly around the nipples. Her face is unaffected.

She lives in a residential home. She feels well in herself otherwise.

In addition to her long-term medications, simvastatin and felodipine, she has been taking zopiclone tablets recently prescribed by her GP, to help her sleep.

What is the most likely diagnosis?

Your answer was incorrect

A	Folliculitis
B	Drug eruption
C	Atopic eczema
D	Scabies

E	Cutaneous T-cell lymphoma

Explanation

D	Scabies

The widespread, itchy eruption, which is worst on the hands, best fits with this diagnosis. Scabies is an infestation with the human scabies mite, *Sarcoptes scabiei*. It is transmitted by close contact so is often spread between family members, at nurseries and in care institutions. Symptoms occur 4-6 weeks after initial infestation, when hypersensitivity occurs to the mite or its waste products. Scabies is characterised by intense itching, particularly at night. This can lead to prominent excoriation. Burrows (linear crusted lesions of a few millimetres in length) are pathognomonic and penile papules are also highly suggestive, though not always evident. It has a predilection for the web-spaces and around the nipples. Secondary eczematisation is not uncommon, as in this case. Scalp involvement only occurs in young babies and very debilitated adults. Treatment is usually with permethrin; close contacts should be treated concurrently.

E	Cutaneous T-cell lymphoma

This may present in a variety of ways, including an eczematous eruption. It usually gives rise to well-defined plaques rather than the much more diffuse picture seen here. Sézary syndrome tends to present with erythroderma, in which the skin is deeply erythematous.

A	Folliculitis

This infection, usually due to *Staphylococcus aureus*, is characterised by pustules.

B	Drug eruption

The rash does not look suggestive of this. Drug eruptions are typically exanthematous (with a maculopapular morphology), and eczematous features are unusual.

C	Atopic eczema

Eczema (in general) may appear at any age, but with no specific pointers to atopy (e.g. history of asthma, childhood eczema, hay fever) and no suggestion of flexural accentuation of the rash, this option is not likely.

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A 21-year-old professional athlete presents to his General Practitioner (GP) with an itchy rash in his right axilla, shown below:

What is the most likely diagnosis?

Your answer was incorrect

A	Acanthosis nigricans
B	Tinea axillaris
C	Systemic lupus erythematosus (SLE)
D	Erythrasma
E	Epidermal naevus

Explanation

B	Tinea axillaris

This is an annular, red lesion with a raised, scaly border, most in keeping with tinea. The rash may well be related to excess sweating linked to sporting activity. Topical azoles are the intervention of choice.

D	Erythrasma

Erythrasma is a superficial skin infection caused by Corynebacterium minutissimum and occurs in skin folds.

A	Acanthosis nigricans

Acanthosis nigricans is associated with a velvety brown hyperpigmentation of the skin, it is associated with obesity, insulin resistance and gastric carcinoma.

C	Systemic lupus erythematosus (SLE)

SLE is associated an erythematous rash which worsens on sun exposure.

E	Epidermal naevus

An epidermal nevus is a benign hamartomatous growth. It presents as a group of verrucous, closely grouped, skin-colored to brown papules and develops in childhood.

39086

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Difficulty: Easy

A 37-year-old man undergoes examination as part of a ‘Well Man’ screening at his General Practitioner’s (GPs) Surgery. The lesion over his heel, shown below, was noted on examination.

What is the most appropriate next investigation?

Your answer was incorrect

A	Fasting lipids
B	Fasting glucose
C	Biopsy of lesion
D	Serum uric acid
E	Rheumatoid factor

Explanation

A	Fasting lipids

The image shows xanthomata affecting the Achilles tendons. Xanthomata are lesions characterised by accumulations of lipid-laden macrophages, and can be a reflection of lipid metabolism alteration or a result of local cell dysfunction. Tendon xanthomata are diagnostic hallmarks of heterozygous familial hypercholesterolaemia (FH) (incidence 1 in 500). Other causes of tendon xanthomata are very rare (phytosterolaemia and cerebrotendinous xanthomata), and the presence of raised cholesterol and tendon xanthomata is therefore effectively pathognomonic of FH. The most common sites for tendon xanthomata are in the tendons overlying the Achilles tendons and the knuckles; less common sites include the extensor hallucis longus tendon and the triceps tendon, and they may also occur on the tibial tuberosity at the site of insertion of the patellar tendon (called subperiosteal xanthomata). Ultrasound can be used to look for subclinical Achilles lesions. In heterozygous FH, cholesterol is >7.5 mmol/l and coronary heart disease begins in the third decade;

men are at greater risk than women and, if untreated, 50–75% will have a myocardial infarction by the age of 60 years. Homozygous FH presents with coronary disease in the teens and cholesterol levels in excess of 16 mmol/l.

E	Rheumatoid factor

Rheumatoid arthritis (RA) is a chronic systemic inflammatory disease of unknown cause. An external trigger (e.g. cigarette smoking, infection or trauma) that triggers an autoimmune reaction, leading to synovial hypertrophy and chronic joint inflammation along with the potential for extra-articular manifestations, is theorised to occur in genetically susceptible individuals.

The signs on clinical examination include:

- stiffness
- tenderness
- pain on motion
- swelling
- deformity
- limitation of motion
- extra-articular manifestations
- rheumatoid nodules.

B	Fasting glucose

Necrobiosis lipoidica diabeticorum is a rash that occurs on the lower legs. It is more common in women, and there are usually several spots. There are also slightly raised shiny, red-brown patches. The centres are often yellowish and may develop open ulcers that are slow to heal.

C	Biopsy of lesion

The diagnosis of the xanthomata is clinical, and ultrasound can be used for confirmation (Achilles lesions).

D	Serum uric acid

Gout and pseudo-gout are the two most common crystal-induced arthropathies. Gout is caused by monosodium urate monohydrate crystals; pseudo-gout is caused by calcium pyrophosphate crystals and is more accurately termed calcium pyrophosphate disease. Physical findings may include the following:

- involvement of a single (most common) or multiple joints
- signs of inflammation – swelling, warmth, erythema (sometimes resembling cellulitis) and tenderness
- fever (also consider infectious arthritis)
- migratory polyarthritis (rare)

- posterior interosseous nerve syndrome (rare)
- tophi in soft tissues (helix of the ear, fingers, toes, prepatellar bursa, olecranon)
- eye involvement – tophi, crystal-containing conjunctival nodules, band keratopathy, blurred vision, anterior uveitis (rare), scleritis.

6338

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Responses Incorrect:	96
Responses Total:	111
Responses - % Correct:	14%

Familial Hypercholesterolaemia

A 23-year-old woman is being investigated for an erythematous, scaly malar rash. She feels generally unwell, with frequent mouth ulcers and intermittent arthralgia of the metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joints for the past few months. She also reports lack of appetite and has lost 5 kg in weight over the last six weeks.

Which of the following tests is the most specific to the likely diagnosis?

Your answer was incorrect

A	Erythrocyte sedimentation rate (ESR)
B	C-reactive protein (CRP)
C	dsDNA antibodies
D	Antinuclear antibodies (ANAs)
E	Serum complement

Explanation

C	dsDNA antibodies

This patient already describes three criteria for SLE (> 4/11 are required to make a diagnosis, although these do not have to be present simultaneously). A high titre of dsDNA antibodies is virtually exclusive to SLE and would confirm this diagnosis. Titres can be used to measure disease activity.

E	Serum complement

Complement levels, ESR and dsDNA titres can be used to monitor disease activity in SLE.

A	Erythrocyte sedimentation rate (ESR)

Raised ESR values are not diagnostic of SLE, but seen across multiple inflammatory conditions. ESR values can be used to monitor disease activity in SLE.

B	C-reactive protein (CRP)

CRP is not particularly useful in SLE, as levels may remain low in active disease.

D	Antinuclear antibodies (ANAs)

ANAs are autoantibodies that bind to contents of the cell nucleus. They are encountered in many conditions such as SLE, rheumatoid arthritis, scleroderma, dermatomyositis, autoimmune hepatitis and primary biliary cholangitis.

9193

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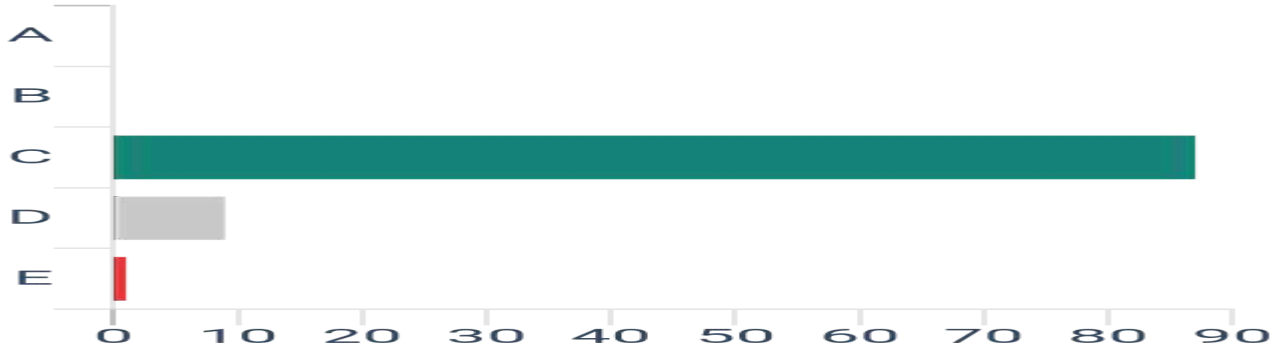

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Responses Correct:	15
Responses Incorrect:	97
Responses Total:	112
Responses - % Correct:	13%

A 32-year-old woman presents to the General Practitioner with complaints of facial flushing and a gradual change of complexion for the past two years. She reports exacerbation of these symptoms on the consumption of spicy food and alcohol. She also mentions burning and stinging when working out in the gym.

What would be the first line of management for this patient?

Your answer was incorrect

A	Limit exposure to known aggravating factors
B	Oral tetracycline
C	Topical brimonidine
D	Topical isotretinoin
E	Topical ivermectin

Explanation

A	Limit exposure to known aggravating factors

This patient is suffering from acne rosacea. The best advice for people with rosacea is to limit exposure to known aggravating factors such as alcohol, sun exposure, hot drinks and spicy food, especially in this patient with erythemato-telangiectatic rosacea.

E	Topical ivermectin

Topical ivermectin should only be considered in patients with papulopustular rosacea.

B	Oral tetracycline

Oral antibiotics should only be considered as a first-line treatment option for more severe papulopustular rosacea.

C	Topical brimonidine

Topical brimonidine is considered in people with rosacea where the main presenting feature is facial erythema.

D	Topical isotretinoin

It would be appropriate to limit exposure to known aggravating factors, rather than using pharmacological interventions, in this patient with erythemato-telangiectatic rosacea.

72851

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Responses Correct:	15
Responses Incorrect:	98
Responses Total:	113
Responses - % Correct:	13%

Dr. Jamil Alrajhi

Apr 6, 2025

A 67-year-old woman presents to the Dermatology Clinic with a mole on her back, which she believes has changed. She feels that it has got somewhat darker, particularly after a recent holiday in the Caribbean. She is fair-skinned and has attended the clinic previously for numerous other moles, none of which have been treated.

The mole, as shown below, is 19 mm × 43 mm. It measures 2.13 mm in thickness.

What is the most appropriate initial management step?

Your answer was incorrect

A	Moh's micrographic surgery
B	Reassure and discharge
C	Treat with topical 5-fluorouracil

D	Undertake a 3-mm punch biopsy
E	Local excision with 2 cm margin

Explanation

E	Local excision with 2 cm margin

This lesion is irregular in diameter, colour and symmetry. This raises high suspicion of malignant melanoma. The most important management step to remember here is that melanoma is managed with local excision. The extent of margin clearance is dependent on the staging based on the American Joint Committee on Cancer's (AJCC) Melanoma of skin staging. In this case, with a stage 2 melanoma a 2 cm clearance is required as per NICE guidelines.

D	Undertake a 3-mm punch biopsy

While a punch biopsy would be a useful step in a suspected malignant lesion, this lesion is particularly worrying for melanoma, given its irregular features. Therefore, it would be appropriate to move straight to a wider excision of this lesion, so that margins can be well assessed.

A	Moh’s micrographic surgery

Moh’s micrographic surgery is a surgical technique through which tissue is removed and examined for both cells present and the margins. This occurs while the patient waits and informs the decision for further tissue removal. This tends to be used for basal cell carcinoma or other less worrying tumours and is not first line for melanoma, the lesion in this question.

B	Reassure and discharge

This lesion is irregular in diameter, colour and symmetry. This raises high suspicion of malignant melanoma. Melanoma is managed with wide local excision. It would be very dangerous to discharge this patient without treatment.

C	Treat with topical 5-fluorouracil

The most likely cause of this lesion is malignant melanoma. Topical 5-fluorouracil may be an effective treatment for actinic keratoses, which are squamous cell carcinomas in situ. Topical 5-fluorouracil would not be an appropriate management step for melanoma.

Rate this question:

A 42-year-old woman presents with a dark, irregularly shaped lesion on her upper back that has grown in size over the last six months. She reports occasional itching and a recent episode of bleeding from the lesion after accidental trauma. On examination, the lesion is asymmetrical, with uneven borders and multiple colours ranging from brown to black, and has a diameter of approximately 9 mm. There are no palpable lymph nodes.

What is the most appropriate investigation to confirm the diagnosis?

Your answer was incorrect

A	Dermoscopy of the lesion
B	Wide local excision of the lesion
C	Excisional biopsy with a 2-mm margin
D	Fine-needle aspiration of the lesion
E	Punch biopsy of the lesion

Explanation

C	Excisional biopsy with a 2-mm margin

The most likely diagnosis is malignant melanoma. An excisional biopsy with narrow margins allows for complete histopathological evaluation of the lesion to confirm the diagnosis and assess the depth, an essential parameter for staging melanoma.

E	Punch biopsy of the lesion

A punch biopsy may miss important features of melanoma such as the lesion's full depth or heterogeneity. It is less ideal than an excisional biopsy for diagnosing melanoma.

A	Dermoscopy of the lesion

Dermoscopy is a non-invasive diagnostic tool that provides a magnified view of the lesion and can help to identify features suggestive of melanoma (eg atypical pigment network, asymmetry). However, it does not provide a definitive diagnosis, which requires histopathological examination.

B	Wide local excision of the lesion

Wide local excision is part of the treatment plan for confirmed melanoma where margins of 1–2 cm are taken, depending on the thickness of the tumour. It is not used for initial diagnosis.

D	Fine-needle aspiration of the lesion

Fine-needle aspiration is typically used for sampling lymph nodes or masses suspected of metastasis, not for primary diagnosis of skin lesions.

74422

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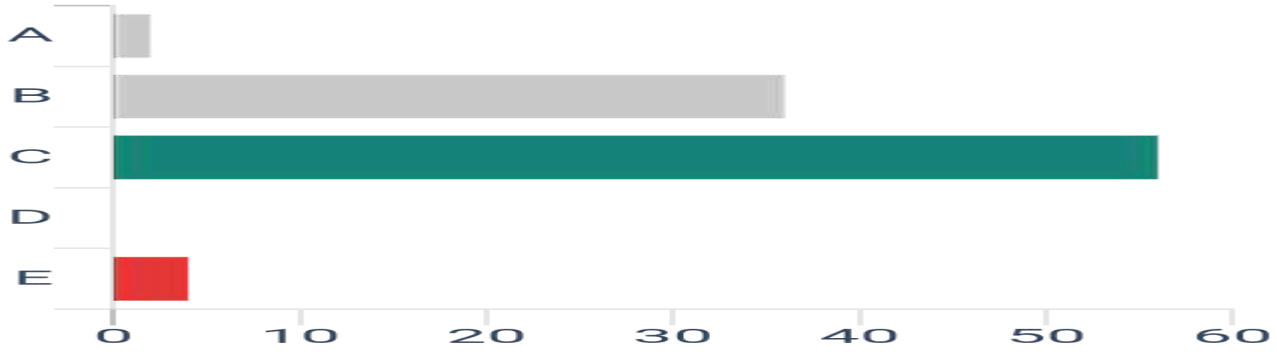

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Responses Total:	115
Responses - % Correct:	13%

A 32-year-old woman presents to the Dermatology Clinic with a 7-month history of rough and dry skin, particularly over her lower limbs. She noticed that her symptoms were worse in winter but always present. She has tried moisturising with supermarket body creams but has found that it makes little difference and affects her confidence. Her past medical history includes type I diabetes mellitus, for which she takes regular insulin therapy. However, her blood sugars have been poorly controlled over the past year.

Her legs are examined and shown below:

What is the most likely diagnosis?

Your answer was incorrect

A	Asteatotic dermatitis
B	Atopic eczema
C	Ichthyosis vulgaris

D	Keratosis pilaris
E	Lichen planus

Explanation

C	Ichthyosis vulgaris

Taking a look at this patient's legs, there is evidence of hyperkeratosis and scaling of the skin. However, there is no visual erythema, excoriations or inflammatory changes. This is likely representative of ichthyosis vulgaris. Ichthyosis refers to dry and scaly skin and can be inherited or acquired. Inherited causes tend to present at an early age, while acquired causes are associated with conditions such as diabetes mellitus, lymphoma and systemic lupus erythematosus. Therefore, the history of diabetes mellitus makes ichthyosis more likely. Stronger paraffin-containing emollients tend to be useful in managing the condition, as well as treating the underlying cause (if acquired).

D	Keratosis pilaris

Keratosis pilaris is a common dermatological condition characterised by a 'goose flesh'-like appearance to skin secondary to multiple follicular keratotic papules with or without associated erythema. It affects anywhere hair grows, so it can occur on all skin surfaces, but is most prevalent on the extremities

A	Asteatotic dermatitis

Asteatotic dermatitis (eczema craquelé) is a cause of dry, cracked skin. The condition most commonly affects the elderly population with the usual presentation being of an elderly patient complaining of dry and itchy skin in the colder months. The legs, arms and trunk are most commonly affected. The appearance of the skin is cracked with excoriation and erythema. Therefore, asteatotic dermatitis will have appearances of superimposed inflammation in contrast to other cracked skin conditions, such as ichthyosis vulgaris as seen in this patient.

B	Atopic eczema

Atopic eczema is an inflammatory skin disorder characterised by dry, exfoliative skin changes associated with erythema, scaling and pruritis. It is a common condition and, therefore, a reasonable differential diagnosis. However, the lack of exfoliative or erythematous skin changes makes an alternative diagnosis more likely.

E	Lichen planus

Lichen planus is an idiopathic inflammatory dermatological condition that causes an eruption of itchy and shiny papules over the extremities that often have a violaceous colour. These lesions are often itchy and can also affect the mucous membranes and genitalia. These lesions are not seen here, making this diagnosis unlikely.

A 31-year-old woman, who is a nursery worker with a history of periorbital eczema, presents to her General Practitioner (GP) complaining of a rash on her right cheek. The rash has been present for about a week but began as a small blister which subsequently ruptured. The patient had thought that it had been an insect bite but became more concerned as the area affected began to increase in size with a similar perioral lesion in the last few days, seen below.

Dr. Jamil Alrajhi

Apr 6, 2025

Although the lesion is painless, the patient does complain of burning and itching over the rash. The patient is otherwise fit and well and is not on any medications. She lives alone and does not recall being in contact with anyone with a similar rash.

On examination, the patient has a weeping area measuring 4 cm across her right cheek with golden, crusted edges. General examination of the patient was otherwise normal and no other lesions were identified.

What is the most likely diagnosis?

Your answer was incorrect

A	Erysipelas
B	Impetigo

C	Herpes simplex infection
D	Herpes zoster infection
E	Atopic dermatitis

Explanation

B	Impetigo

Atopic skin is prone to acquiring superimposed bacterial and viral infections. Impetigo is an acute and highly contagious superficial infection of the skin that commonly occurs in children, and consequently outbreaks in nurseries and schools are not rare. The pustules and yellow coloured crusted erosions in the peri-oral area here are classical. There are two forms of the condition, bullous and non-bullous, with the former being caused almost exclusively by Staphylococcus aureus whereas the latter can be caused by S. aureus, group A streptococcus (Streptococcus pyogenes), or a combination of both. Culture of the skin lesions is required to confirm the diagnosis and determine the causative organism. Treatment can consist of topical therapy (topical mupirocin) alone or in combination with systemic therapy.

Image source: https://commons.wikimedia.org/wiki/File:OSC_Microbio_21_02_impetigo.jpg (https://commons.wikimedia.org/wiki/File:OSC_Microbio_21_02_impetigo.jpg)

C	Herpes simplex infection

Herpes simplex virus (HSV) infection can cause a variety of clinical symptoms. HSV type 1 is normally associated with orofacial infections. It typically presents as vesicular rash that may be preceded by a prodrome of pain, tingling, burning or itching. Vesicles become pustular or ulcerative with formation of crusts within 72–96 hours and heal over 8–10 days.

A	Erysipelas

Erysipelas is a superficial bacterial skin infection caused by *S. pyogenes* and characterized by well demarcated erythema. Lymphatic involvement is common and manifests by streaking of the overlying skin and local lymphadenopathy.

D	Herpes zoster infection

Primary herpes zoster infection causes chickenpox. The virus becomes latent and upon reactivation causes shingles (a painful, vesicular rash in a dermatomal distribution).

E	Atopic dermatitis

AD is a chronic pruritic condition with characteristic skin changes (inflamed, red, and sometimes weepy patches) that occurs due to a complex interaction between genetic and environmental factors. It usually begins in infancy, but may also occur at any age. Atopic skin is prone to acquiring superimposed infections, commonly with either HSV (eczema herpeticum) or *S. Aureus* (impetigo).

7612

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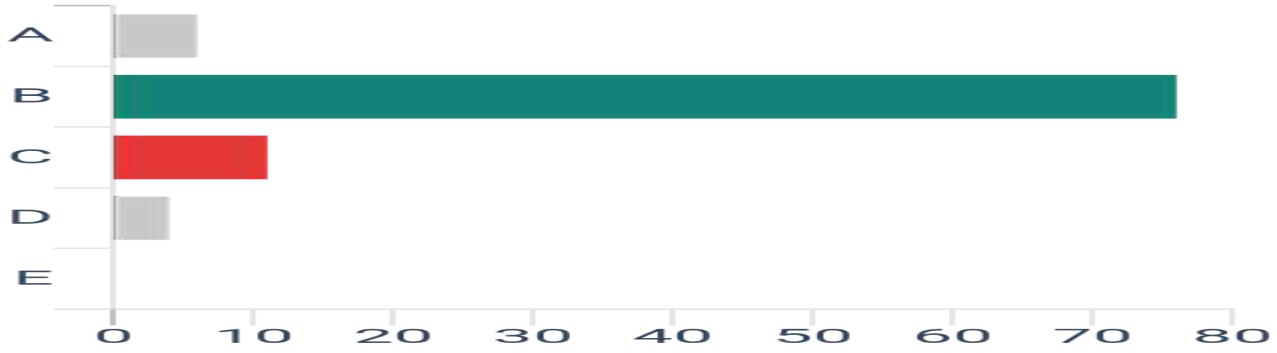

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Responses Total:	117
Responses - % Correct:	13%

Impetigo

A 27-year-old man of Chinese origin is commenced on Carbamazepine for complex partial seizures. He presents to the Emergency Department (ED) a few days later complaining of upper respiratory tract infection (RTI) symptoms, and severe ulceration affecting his mouth and lips.

On examination, his temperature is 38.2°C. His blood pressure (BP) is 115/82 mmHg, while his pulse is 80 beats per minute (bpm) and regular. You confirm a number of ulcers within the oropharynx. He has a number of target lesions over the surface of his body, some of which have ulcerated with a necrotic centre. In certain areas the lesions have become confluent, with wider areas of skin loss.

Investigations reveal the following:

Investigation	Result	Normal values
Haemoglobin (Hb)	131 g/l	135–175 g/l
White cell count (WCC)	11.2 × 10^9/l	4.0–11.0× 10^9/l
Platelets (PLT)	201×10^9/l	150–400× 10^9/l
Sodium (Na^+)	137 mmol/l	135–145 mmol/l
Potassium (K^+)	4.0 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	110 µmol/l	50–120µmol/l
Glucose	5.1 mmol/l	3.9–7.1 mmol/l
Erythrocyte sedimentation rate (ESR)	65 mm/hour	1–20 mm/hour

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Behçet's disease
B	Bullous pemphigoid
C	Legionella pneumonia infection
D	Pemphigus vulgaris
E	Stevens-Johnson Syndrome

Explanation

E	Stevens-Johnson Syndrome

The answer is Stevens-Johnson syndrome (SJS) -

SJS is recognised to occur in patients prescribed Carbamazepine, particularly in patients of Chinese origin who are HLA B1502 positive. The severe mucosal ulceration, coupled with target lesions and wider areas of erythema is consistent with the diagnosis. Often patients complain of upper respiratory tract symptoms at the same time as skin / mucosal lesions appear. Removal of the offending agent is the key intervention with supportive therapy to maintain fluid balance and prevent infection where possible. Use of corticosteroids in managing the condition is the subject of debate.

B	Bullous pemphigoid

Bullous pemphigoid is incorrect, it is associated with a blistering skin rash which is more commonly associated with flexural skin and mucosal surfaces. It is not usually associated with the prodrome of upper respiratory tract infection seen here, or with Carbamazepine therapy.

A	Behçet’s disease

Behçet’s disease, is incorrect, it is associated with mucosal ulceration, uveitis and arthritis. It tends to relapse and remit, it is unlikely to occur in such close proximity to the Carbamazepine start.

C	Legionella pneumonia infection

Legionella pneumonia infection, is incorrect, it is associated with pleuritic chest pain without dermatological manifestations as seen here.

D	Pemphigus vulgaris

Pemphigus vulgaris, is incorrect, it is much more protracted in onset, with oral lesions usually appearing first, skin lesions being seen up to 4 months later.

A 78-year-old man presents to the Dermatology Clinic with an erythematous rash which has gradually increased in severity over the past seven months. The rash forms concentric erythematous bands, very much like the wood grains you would see on a tree. He has a chronic cough, thought to be related to previous cigarette smoking, although he gave up some 30 years earlier, and has had an operation for an inguinal hernia some five years earlier.

Which of the following is the most likely underlying malignancy?

Your answer was correct

A	Gastric carcinoma
B	Oesophageal carcinoma
C	Pancreatic carcinoma
D	Small cell lung cancer
E	Squamous cell carcinoma of the bronchus

Explanation

E	Squamous cell carcinoma of the bronchus

This rare skin condition is erythema gyratum repens, which is most often seen in association with squamous cell carcinoma of the bronchus. It may also be seen in association with oesophageal and breast cancer, although the difficulty with a cough is a stronger pointer towards lung cancer.

A	Gastric carcinoma

Gastric cancer is associated with acanthosis nigricans.

B	Oesophageal carcinoma

Although oesophageal carcinoma is associated with erythema gyratum repens, it is less likely here given the absence of symptoms of indigestion.

C	Pancreatic carcinoma

Pancreatic carcinoma is associated with thrombophlebitis migrans.

D	Small cell lung cancer

Skin rashes are not a usual phenomenon associated with small cell lung cancer.

38310

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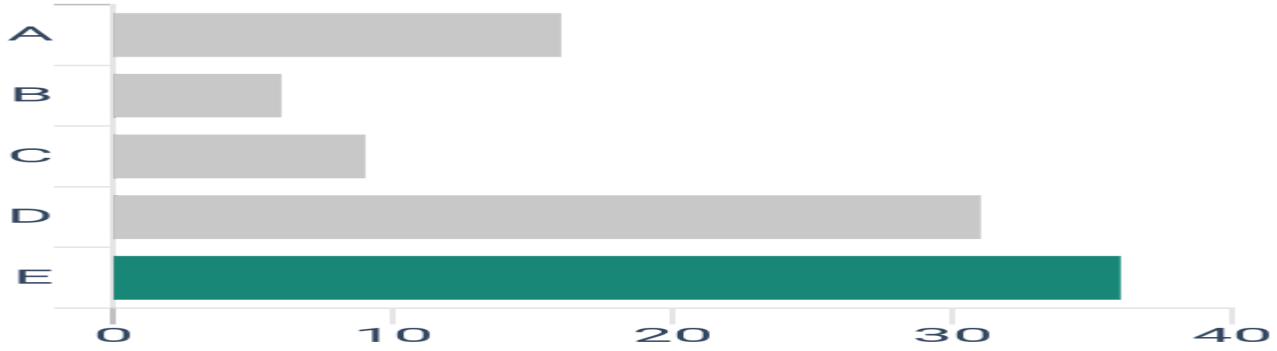

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Responses Incorrect:	103
Responses Total:	119
Responses - % Correct:	13%

A 32-year-old man presents to the Dermatology Clinic for review. He has an annular, scaling lesion some 4 cm in diameter affecting his right forefoot. He has a history of type I diabetes, well-controlled on a basal bolus insulin regime. His most recent HbA1c has been measured at 51 mmol/mol (6.8%). Apparently, the General Practitioner (GP) has prescribed oral co-amoxiclav and topical fusidic acid ointment, although these have been ineffective.

The lesion is shown below.

Which of the following interventions is most appropriate?

Your answer was incorrect

A	Oral flucloxacillin
B	Oral itraconazole

C	Oral griseofulvin
D	Oral terbinafine
E	Ketoconazole cream

Explanation

E	Ketoconazole cream

The image reveals a pink, annular, scaling skin lesion of the patient's thigh which fits best with tinea infection. Most cases respond to topical Imidazole therapy over a course of 3–4 weeks. In those that do not respond, oral Itraconazole would be the next step or terbinafine as a second-line option.

Image source: https://commons.wikimedia.org/wiki/File:Tinea_corporis.png (https://commons.wikimedia.org/wiki/File:Tinea_corporis.png) - Public domain

D	Oral terbinafine

Terbinafine is an effective second-line option for tinea infections, first-line treatment is oral imidazoles such as itraconazole.

A	Oral flucloxacillin

The description of the lesions is typical of fungal infections and therefore flucloxacillin would not be appropriate.

B	Oral itraconazole

Most cases of tinea infections respond to topical treatment and therefore systemic treatment is not appropriate as a first-line treatment option.

C	Oral griseofulvin

Griseofulvin is usually reserved for the treatment of fungal infections in children and therefore is not an appropriate treatment option.

Rate this question:

A 58-year-old man presents to his General Practitioner (GP) with an asymptomatic rash on his face, which has been present for several years. He is well in himself, although has a history of iron deficiency anaemia.

He says that he feels fit and well. He takes amlodipine, pravastatin and ferrous sulphate regularly.

What is the most likely diagnosis?

Your answer was incorrect

A	Hereditary haemorrhagic telangiectasia
B	Peutz–Jegher syndrome
C	Limited systemic sclerosis
D	Idiopathic thrombocytopenia purpura
E	Rosacea

Explanation

A	Hereditary haemorrhagic telangiectasia

This is an autosomal, dominantly inherited condition. Small dilated blood vessels manifest as red macules and papules, visible around the mouth, and on the lips and fingers. Lesions also occur on mucous membranes and in the gastrointestinal tract: these may be associated with severe epistaxis and gastrointestinal bleeding. Anaemia

due to bleeding is treated with oral iron. The cutaneous involvement does not need any treatment, although vascular lasers are usually effective for symptomatic lesions.

C	Limited systemic sclerosis

This used to be termed CREST syndrome (calcinosis, Raynaud's phenomenon, oesophageal dysmotility, sclerodactyly or telangiectasia). Facial telangiectasia, including of the oral mucosa, is a feature, but the absence of other symptoms or signs in this case makes HHT a better response.

B	Peutz–Jegher syndrome

This is another rare, genetically determined condition that is characterised by pigmented macules on the lips, the skin around the mouth and the fingers and toes, occurring early in childhood. It is associated with small bowel polyps, which can cause intussusception. The gene confers a high risk of developing internal cancers, not only developing from intestinal polyps, but also in many other organs.

D	Idiopathic thrombocytopenia purpura

Any cause of thrombocytopenia may result in purpura, but the discrete, fixed lesions confined to the face seen here are more in keeping with telangiectasia.

E	Rosacea

This is an acneiform disorder which usually presents with facial papules and pustules. These may be on a background of diffuse telangiectasia. The discrete lesions shown in the image, with an absence of inflammatory changes, are more suggestive of HHT.

6324

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Difficulty: Easy

Dr. Jamil Alrajhi

Apr 6, 2025

A 56-year-old woman presents to her General Practitioner (GP) with symmetrical, elevated dark pink lesions over both shins. The lesions have a shiny, orange peel appearance. She has lost 4 kg in weight over the past six months and she has recently developed atrial fibrillation (AF).

Which of the following is most likely to be found on hand examination?

Your answer was incorrect

A	Nail pitting
B	Koilonychia
C	Acropachy
D	Deforming hand arthritis
E	Leukonychia

Explanation

C	Acropachy

These lesions describe pretibial myxoedema, which occurs in 5% of patients with Graves' disease. It is almost always accompanied by exophthalmos and occasionally thyroid acropachy.

E	Leukonychia

Leukonychia is seen in patients suffering from hypoalbuminaemia – for example, in chronic liver disease.

A	Nail pitting

Nail pitting and onycholysis are most likely to be associated with psoriasis, although onycholysis may also be seen in patients with thyroid disease.

B	Koilonychia

Koilonychia is derived from the Greek, denoting spoon-shaped nails, seen as a result of iron deficiency anaemia.

D	Deforming hand arthritis

Deforming hand arthritis is seen in rheumatoid disease and in psoriasis, neither of which are associated with pre-tibial myxoedema.

9197

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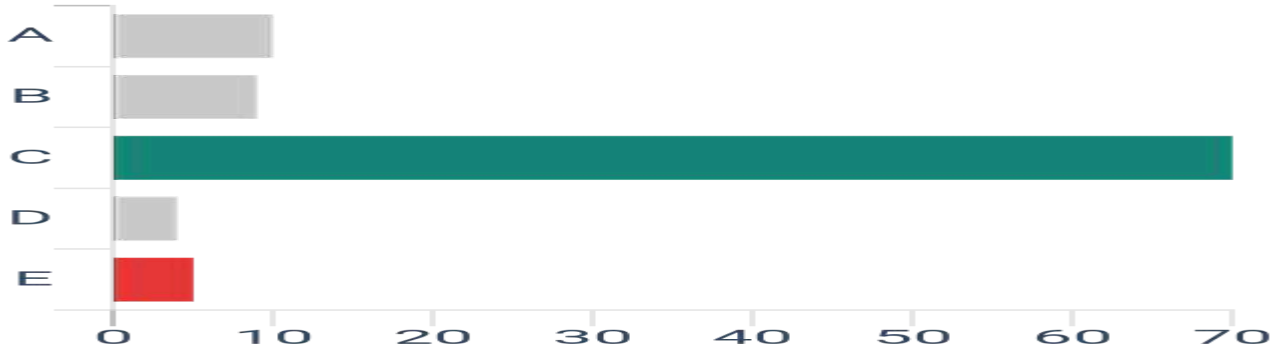

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Responses Correct:	16
Responses Incorrect:	106
Responses Total:	122
Responses - % Correct:	13%

Thyrotoxicosis

A 22-year-old woman with psoriasis attends your Dermatology Clinic. She has tried multiple creams and has had several courses of ultraviolet B (UVB) therapy. During the consultation, she is tearful and frustrated, stating the psoriasis is ‘taking over her life’ and ruining her social life and self-esteem. She is reluctant to consider systemic therapies that would weaken her immune system. You feel that acitretin may be a good option for her and ask her about her desire to have children. She states that, although she is currently in a relationship, she has no plans to start a family.

How long would she have to avoid pregnancy after taking acitretin?

Your answer was correct

A	1 Week
B	2 Weeks
C	1 Month
D	6 Months
E	3 Years

Explanation

E	3 Years

Manufacturer’s guidelines state that the time required to avoid pregnancy with acitretin is 3 years. The prescribing information states that pregnancy must be reliably prevented 4 weeks before, during and for 3 years after the completion of therapy. Advice on contraception is also given to males starting therapy who are sexually active. Isotretinoin and alitretinoin must be discontinued at least 1 month before pregnancy.

A	1 Week

For any medication with potential effects on pregnancy, contraceptive precautions must be continued for at least one cycle. As such, 1 week is considered too short.

B	2 Weeks

Two weeks is less than the duration of a single menstrual cycle and is therefore inappropriate advice with respect to avoidance of conception for any medication which may impact on successful pregnancy.

C	1 Month

One month is the length of a single menstrual cycle; like 1 week and 2 weeks, 1 month is therefore considered too short a period of avoidance of conception.

D	6 Months

Six months is the recommended period of pregnancy avoidance after methotrexate therapy.

38302

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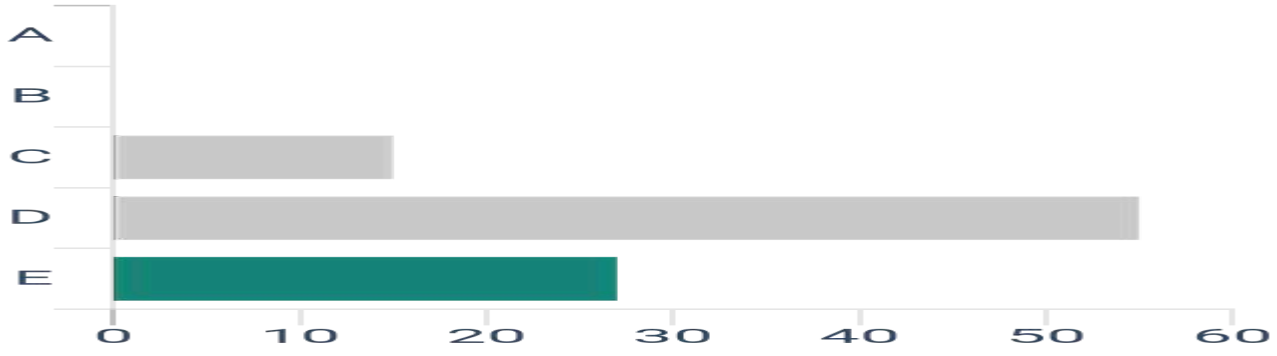

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Responses Correct:	17
Responses Incorrect:	106
Responses Total:	123
Responses - % Correct:	14%

A 56-year-old woman presents to the Dermatology Clinic with the skin lesion shown below on the anterior aspect of her shin. She thinks that is increasing in size. She also attends another hospital for diabetes mellitus, for which she takes a combination of metformin and sitagliptin.

Over the past few months, she admits to increasing tiredness and vague joint pains.

On examination, her blood pressure (HP) is 149/82 mmHg. Her pulse is 72 beats per minute (bpm) and regular and her body mass index (BMI) is 29 kg/m^2.

Which is the most likely cause of her skin lesion?

Your answer was incorrect

A	Psoriasis
B	Sarcoidosis
C	Basal cell carcinoma
D	Systemic lupus erythematosus (SLE)
E	Necrobiosis lipoidica diabeticorum

Explanation

E	Necrobiosis lipoidica diabeticorum

Early necrobiosis lipoidica diabeticorum is often difficult to diagnose as it may appear psoriatic in nature, and telangiectasia are seen on the waxy surface. Less than 1% of diabetic patients have this, but most patients with the condition have diabetes mellitus (60%). Lesions appear as one or more discoloured areas on the fronts of the shins - shiny, atrophic and brown-red or slightly yellow. The margin may be erythematous or violet. Treatment is difficult, although anti-platelet agents and immunomodulators appear to show at least some effect on progression.

B	Sarcoidosis

Sarcoidosis is associated with erythema nodosum, with multiple raised red/purple nodules on the shins, rather than the single enlarging lesion seen here.

A	Psoriasis

A single lesion on the shin is unlikely to be due to psoriasis, and the size increase is consistent with necrobiosis lipoidica.

C	Basal cell carcinoma

Sun-exposed areas of skin, such as the head and neck, are the commonest areas for basal cell carcinomas to occur. They may resemble necrobiosis in the early stages, although a more nodular appearance versus that seen here would be expected.

D	Systemic lupus erythematosus (SLE)

SLE is associated with erythema nodosum and arthritis, but other features such as a rash on sun-exposed areas of skin are not seen here.

A 28-year-old man presents to his General Practitioner (GP) with the rash shown below. His mother also suffers from a similar skin condition.

What is the most likely diagnosis?

Your answer was incorrect

A	Eruptive xanthomas
B	Tuberous sclerosis
C	Neurofibromatosis
D	Dercum's disease
E	Keratosis pilaris

Explanation

C	Neurofibromatosis

The picture shows multiple cutaneous neurofibromata.

Criteria for the diagnosis of neurofibromatosis are:

- six or more café-au-lait spots
- two or more neurofibromas
- axillary freckling
- two or more Lisch nodules (iris hamartomata)
- optic glioma
- a parent or sibling with neurofibromatosis.

Associated abnormalities include:

- skeletal rib notching and other bony defects
- honeycomb lung
- intellectual disability
- kyphoscoliosis

hypertension (renal artery stenosis, phaeochromocytoma).

D	Dercum’s disease

Dercum’s disease also known as adiposis dolorosa is of unknown aetiology and characterised by a combination of lipomas, painful subcutaneous plaques and non-traumatic ecchymoses.

A	Eruptive xanthomas

Eruptive xanthomas are rapidly occurring crops of small, red-yellow papules that commonly occur over the buttocks, shoulders, arms and legs. Lesions may be tender and itchy and are associated with hypertriglyceridaemia.

B	Tuberous sclerosis

Features of tuberous sclerosis include angiofibromata, ash-leaf macules, shagreen patches and periungual fibromata. The condition may also be associated with epilepsy and cognitive impairment.

E	Keratosis pilaris

Keratosis pilaris is a very common form of dry skin, characterised by hair follicle plugging due to excess keratin. It most often affects the outer aspect of the forearms but may also occur in other sites in a symmetrical distribution.

33400

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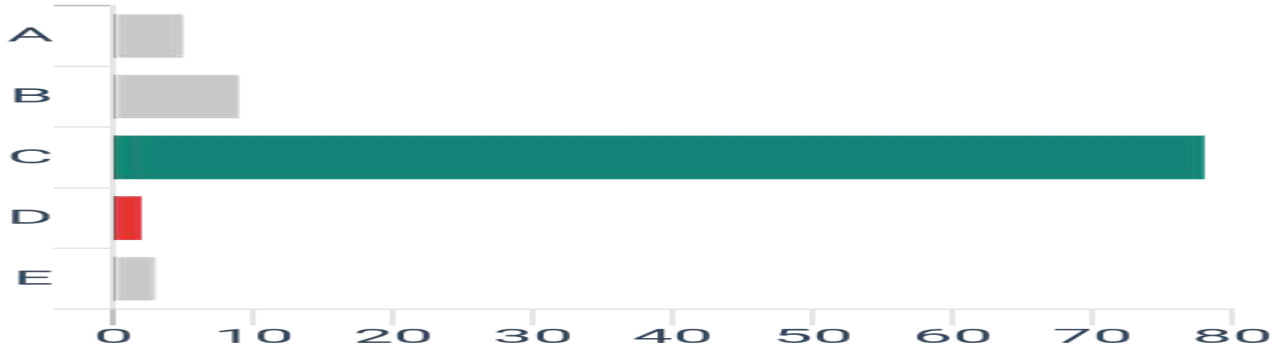

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Responses Correct:	17
Responses Incorrect:	108
Responses Total:	125
Responses - % Correct:	14%

Neurofibromatosis

A 45-year-old woman presents to the Dermatology Clinic for review. She has gained 15 kg in weight over the past year and is very concerned about her appearance due to numerous striae across her abdomen and upper thighs. She has a past history of asthma, for which she takes salbutamol as required. She admits to overeating and drinks 1–2 bottles of wine per week.

On examination, her BP is 155/92 mmHg and her heart rate is 75 bpm and regular. She has marked truncal obesity, with a BMI of 33 kg/m^2. She also finds it difficult to get up out of a chair in the clinic without using her arms.

Investigations:

Investigation	Results	Normal Values
Haemoglobin (Hb)	131 g/l	135–175 g/l
White cell count (WCC)	7.1 × 10^9/l	4.0–11.0 × 10^9/l
Platelets (PLT)	189 × 10^9/l	150–400 × 10^9/l
Sodium (Na^+)	143 mmol/l	135–145 mmol/l
Potassium (K^+)	3.4 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	95 µmol/l	50–120 µmol/l
Fasting glucose	7.3 mmol/l	< 5.6 mmol/l
Random cortisol	621 nmol/l	280–700 nmol/l
0900 h cortisol post-overnight low-dose dexamethasone suppression test	150 nmol/l	< 50 nmol/l
Follicle-stimulating hormone (FSH)	2 U/l	1–7 U/l
Luteinising hormone (LH)	1 U/l	1.25–7.80 U/l
Plasma corticotropin (ACTH)	7 pmol/l	2.2–13.3 pmol/l

Which of the following is the most likely diagnosis?

Your answer was correct

Dr. Jamil Alrajhi
Apr 6, 2025

A	Adrenal adenoma
B	Cushing's disease

C	Non-functioning pituitary adenoma
D	Pseudo-Cushing’s disease
E	Type II diabetes

Explanation

B	Cushing’s disease

Clinical features with Cushing syndrome, such as hypertension, diabetes mellitus, marked truncal obesity and proximal myopathy, are all present here. The key differentiator is that the adrenocorticotropin hormone (ACTH) is not suppressed and cortisol is not suppressed by dexamethasone, which immediately alerts us to a potential ACTH-producing pituitary adenoma. The reduction in luteinising hormone (LH) and follicle-stimulating hormone (FSH) levels are other potential clues to pituitary-dependent Cushing’s disease.

A	Adrenal adenoma

Adrenal adenoma is unlikely here because although the dexamethasone suppression test suggests Cushing syndrome, the fact that ACTH is not suppressed effectively means this must be due to a pituitary adenoma.

C	Non-functioning pituitary adenoma

Non-functioning adenoma is incorrect because although the LH and FSH levels are low, the ACTH level is elevated and is driving elevated cortisol levels, which is highly suggestive of an ACTH-producing tumour.

D	Pseudo-Cushing’s disease

Pseudo-Cushing’s disease presents similarly to Cushing’s disease. However, rather than an endogenous cause of raised cortisol levels and corticosteroids, pseudo-Cushing’s disease is associated with chronic alcohol excess. This patient drinks 1–2 bottles of wine a week, equivalent to 10–20 units, which is unlikely to be enough to cause this clinical picture.

E	Type II diabetes

Type II diabetes mellitus is unlikely here. Although this patient is overweight and has a raised glucose level, the diagnosis does not explain this patient’s abnormal dexamethasone suppression test or other clinical features such as proximal myopathy.

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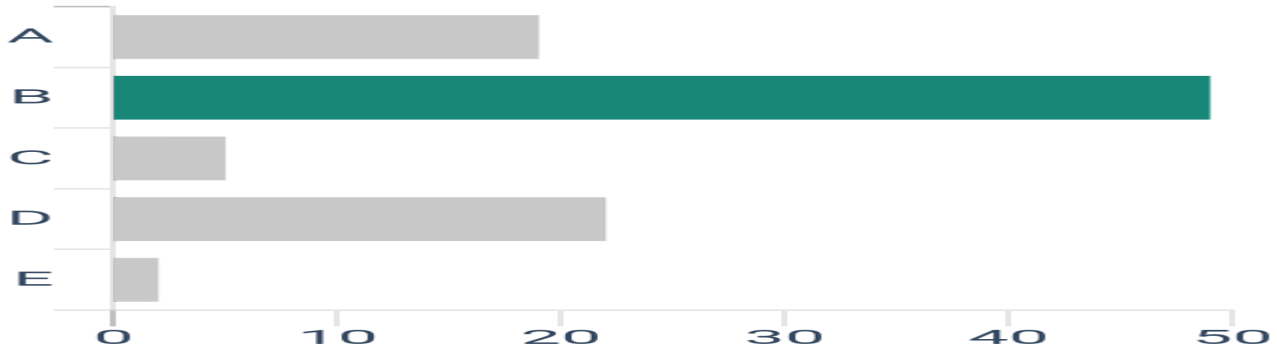

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Responses Incorrect:	108
Responses Total:	126
Responses - % Correct:	14%

Cushing Syndrome

Media

Expanded explanations

Flashcards

A 19-year-old man is referred to the Neurology Outpatient Department by his General Practitioner (GP), who suspects that he may have neurofibromatosis (NF). He is of short stature and has mild learning difficulties. He also suffers from mild hypertension.

A photograph of the affected area is shown below.

Which of the following combinations of criteria would establish the diagnosis in this patient?

Your answer was correct

A	Six or more café-au-lait macules > 5 mm and axillary freckling
B	Six or more café-au-lait macules > 15 mm and the presence of a juvenile cataract

C	Two or more neurofibromas of any type and a Lisch nodule
D	Sphenoid dysplasia and two or more Lisch nodules
E	Renal artery stenosis and freckling in the inguinal region

Explanation

D	Sphenoid dysplasia and two or more Lisch nodules

Sphenoid wing dysplasia is characteristic, but not pathognomonic of type 1 NF. In company with Lisch nodules, this is consistent with a diagnosis of type 1 NF.

A	Six or more café-au-lait macules > 5 mm and axillary freckling

Type 1 NF (von Recklinghausen's disease) is an autosomal dominant condition with variable expression. The affected gene is on chromosome 17. Mild learning difficulties are common in these patients, and hypertension may occur in association with renal artery stenosis or phaeochromocytoma.

The diagnosis of NF in this adult patient fails to meet the following criterion: six or more café-au-lait macules > 15 mm in size.

B	Six or more café-au-lait macules > 15 mm and the presence of a juvenile cataract

The presence of juvenile cataracts does not form part of the diagnostic criteria for type 1 NF.

C	Two or more neurofibromas of any type and a Lisch nodule

Two or more Lisch nodules would need to be present for the diagnosis of type 1 NF to be made.

E	Renal artery stenosis and freckling in the inguinal region

The diagnosis of type 1 NF is made of two or more of the following criteria present:

- six or more café-au-lait macules > 5 mm (prepubertal) or > 15 mm (post-pubertal)
- two or more neurofibromas of any type or one plexiform
- freckling in the axillary or inguinal regions
- optic glioma
- two or more Lisch nodules on the iris

- distinctive osseous lesion typical of type 1 NF, eg sphenoid dysplasia, thickening of the long bone cortex with or without pseudo-arthrosis
- a first-degree relative with type 1 NF.

6074

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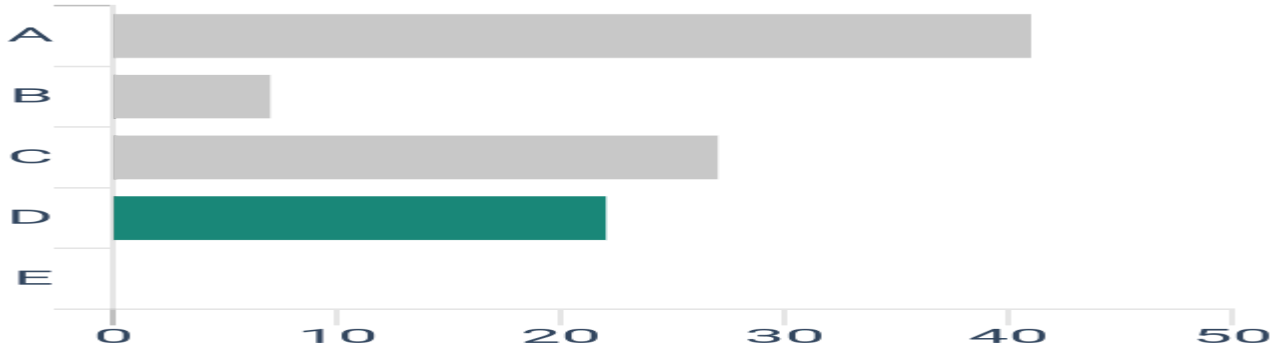

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Responses Correct:	19
Responses Incorrect:	108
Responses Total:	127
Responses - % Correct:	15%

Neurofibromatosis

A 34-year-old man is reviewed in the Emergency Department (ED) having presented with lethargy.

While examining him, you notice the rash in the image shown below. He tells you that occasionally it is itchy, but it has been there for at least four years. He has a family history of vitiligo.

He is a non-smoker and drinks no alcohol. He takes no medications regularly and has no allergies. Physical examination, apart from the rash, is normal. He is keen to improve the appearance.

What is the most appropriate management option?

Your answer was incorrect

A	Wash with ketoconazole body wash
B	Referral to a dermatologist for skin biopsy
C	Moderate-potency topical corticosteroid

D	Reassure the patient and advise no treatment is available
E	Oral prednisolone

Explanation

A	Wash with ketoconazole body wash

This diagnosis here is pityriasis versicolor. This is caused by overgrowth of the (usually) commensal yeast, *Malassezia furfur.* It typically presents in young adults in warm weather or after a sunny holiday, with asymptomatic hypo- or sometimes hyperpigmented macules with very fine peripheral scaling. It is usually confined to the trunk. The diagnosis should be confirmed mycologically on a skin scraping. It may respond to topical antifungal treatment, such as washing with ketoconazole body wash. Other options include antifungal creams, or itraconazole 200 mg once daily for a week. Patients should be advised that the pigmentation may take months to return to normal after successful treatment.

Pityriasis versicolor is sometimes confused with vitiligo. The latter causes depigmentation rather than hypopigmentation, usually affecting much larger areas than the 1 cm lesions of pityriasis versicolor. The hands, face and genitalia are fairly commonly affected in vitiligo, but not in pityriasis versicolor. Scaling does not occur in vitiligo.

B	Referral to a dermatologist for skin biopsy

This condition is usually a simple clinical diagnosis which can be confirmed via a skin scraping.

C	Moderate-potency topical corticosteroid

Topical steroids are ineffective for this condition and might make it worse.

D	Reassure the patient and advise no treatment is available

Whilst reassurance is appropriate, pityriasis versicolor can usually be treated fairly simply, though it may recur.

E	Oral prednisolone

This has no role in the treatment of a yeast infection.

Rate this question:

A 42-year-old Egyptian man presents to the Dermatology Clinic with changes on his nose which have developed over a period of 10 years.

Further examination reveals no further skin lesions or regional lymphadenopathy.

He was seen when in Cairo by his usual doctor, who told him that there was little he could do about the end of his nose, which has considerably worsened in appearance over the past few months. It does not give him any trouble, but he finds it unsightly.

Dr. Jamil Alrajhi

Apr 6, 2025

What is the most likely diagnosis?

Your answer was correct

A	Tularaemia
B	Lupus pernio
C	Lupus vulgaris
D	Basal cell carcinoma
E	Squamous cell carcinoma

Explanation

C	Lupus vulgaris

This is a chronic tuberculous infection of the skin, which is now very rare in developed countries. It presents as a slowly enlarging, infiltrated plaque. Diagnosis may be possible on histology or via tissue culture. Treatment is the same as that for pulmonary tuberculosis.

A	Tularaemia

This tick-borne bacterial infection is endemic in Egypt. There are various types of presentation, including chronic skin ulceration. Over time, this tends to heal with scarring. Lymphadenopathy tends to be prominent in this condition.

B	Lupus pernio

This is a subtype of sarcoidosis. The nose and ears are common sites, but it is usually associated with deep-seated inflammation. The colour is violaceous or mauve and there is little surface change.

D	Basal cell carcinoma

This is commoner in lighter skin types. It does usually progress very slowly if untreated. The lesion in the image lacks specific features of this diagnosis (pearly, rolled edge; telangiectasia).

E	Squamous cell carcinoma

The history is too long for this, as SCC would likely have become more nodular or ulcerated by this time, as well as probably metastasising to local lymph nodes. The tissue distortion would not be compatible with SCC-in situ (Bowen's disease).

An 18-year-old, fit and healthy woman of normal body weight is about to be treated with isotretinoin for scarring acne.

Which of the following is most important before starting therapy?

Your answer was incorrect

A	Low-cholesterol diet
B	Monitoring of renal function
C	Use of sun screen
D	Negative pregnancy testing
E	Weight control

Explanation

D	Negative pregnancy testing

Isotretinoin is highly teratogenic. Effective contraception must therefore be instituted at least one month before starting therapy, and a negative pregnancy test witnessed before treatment is commenced. Patients who become pregnant while on therapy should be offered a termination.

E	Weight control

Isotretinoin may precipitate benign intracranial hypertension in some patients who use it. We are told this patient is fit and well with a normal body weight, and measures to control weight gain are therefore unlikely to be needed.

A	Low-cholesterol diet

Although treatment with isotretinoin may precipitate elevations in LDL and triglycerides, no dietary intervention is required. Baseline testing of lipid profile is recommended.

B	Monitoring of renal function

Renal function does not affect metabolism of isotretinoin and no dose adjustment is recommended. Liver function testing, in contrast, is recommended for patients commencing isotretinoin therapy.

C	Use of sun screen

Intense sun exposure can lead to hypersensitivity rashes in patients taking isotretinoin, and sun screen is advised, although this clearly is not as crucial an intervention as pregnancy testing.

71467

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Responses Incorrect:	110
Responses Total:	130
Responses - % Correct:	15%

A 52-year-old woman who has Raynaud's phenomenon and gastro-oesophageal reflux disease (GORD) comes to the Dermatology Clinic for review. She is very concerned about the cosmetic appearance of her neck, which is shown in the image below:

Current medications of note include amlodipine and lisinopril, which she takes for control of high blood pressure (BP).

On examination, there is thickening of the skin over her hands and several telangiectasia over the upper chest.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Acquired ichthyosis (AI)
B	Lupus vulgaris
C	Morphoea
D	Systemic lupus erythematosus (SLE)

E	Systemic sclerosis

Explanation

E	Systemic sclerosis

The picture shows significant skin thickening over the anterior neck, which is consistent with systemic sclerosis. The Raynaud's phenomenon, skin changes over the hands, telangiectasia, reflux and hypertension also support the diagnosis.

C	Morphoea

Morphoea is localised scleroderma, which would not fit with the generalised symptoms this patient has, including Raynaud's phenomenon, hypertension and GORD.

A	Acquired ichthyosis (AI)

AI is associated with dry skin and severe skin scaling, rather than thickening as seen here. It is associated with the development of lymphoma in older adults.

B	Lupus vulgaris

Lupus vulgaris is the skin manifestation of *Mycobacterium tuberculosis* infection, which appears as painful nodular skin lesions. They are seen around the neck and may also be seen on the face.

D	Systemic lupus erythematosus (SLE)

SLE is associated with small joint polyarthritis and photosensitive rash, as opposed to the picture seen here with predominant skin thickening.

71612

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A 56-year-old woman attends her General Practitioner (GP) after developing a flaccid blistering over her face, axillae and groins, which rupture to leave painful erosions. She also complains of a painful mouth.

Biopsy with immunofluorescence shows immunoglobulin deposition throughout the epidermis.

Given the likely diagnosis, what is the most appropriate treatment?

Your answer was incorrect

A	Prednisolone 0.5-1.5 mg/kg od
B	Prednisolone 10 mg od
C	Topical steroids
D	Methotrexate 15 mg weekly

E	Amoxicillin 500 mg tds

Explanation

A	Prednisolone 0.5-1.5 mg/kg od

This woman has classic features of pemphigus vulgaris. The blisters are flaccid and commonly affect mucosal membranes. In contrast, bullous pemphigoid presents with tense blisters and immunofluorescence along the basement membrane. Patients require high-dose oral steroids to induce remission; however, the optimal steroid dosing has not been fully validated yet. Patients often also require long-term lower dose steroids for maintenance, usually for around two years. The severity and history of the condition are variable. Prior to the use of steroids the condition used to have a high mortality, which has now been reduced to 5–15%.

E	Amoxicillin 500 mg tds

Amoxicillin is an antibiotic and not indicated in the treatment of pemphigus vulgaris. In the case of acquiring a superimposed skin infection, alternative antibiotics such as flucloxacillin are commonly used.

B	Prednisolone 10 mg od

Higher doses of oral steroids are required in order to induce remission; however, lower doses may be used in long-term in order to maintain remission.

C	Topical steroids

Oral, and not topical, steroids are the recommended treatment against pemphigus vulgaris.

D	Methotrexate 15 mg weekly

Methotrexate is an immune suppressant commonly used to treat several dermatological conditions including psoriasis and eczema. However, it is not commonly used in the treatment of pemphigus vulgaris due to a series of publications that linked it to high rates of morbidity and mortality.

A 45-year-old man presents to his General Practitioner (GP) with flat pigmented patches over his flanks and gums. He has been treated over the past few months for a pustular rash around his nose.

Which of the following drugs is most likely to be responsible?

Your answer was incorrect

A	Minocycline
B	Erythromycin
C	Prednisolone
D	Co-trimoxazole
E	Flucloxacillin

Explanation

A	Minocycline

Increased skin pigmentation with blue/black or grey discoloration is rarely seen in patients taking minocycline for a prolonged period. The facial rash may well be rosacea, for which tetracyclines are a standard treatment modality.

D	Co-trimoxazole

Co-trimoxazole is associated with skin rashes and photosensitivity, rather than the hyperpigmentation seen here.

B	Erythromycin

Erythromycin may be associated with skin eruptions, itching and urticaria, not with skin pigmentation.

C	Prednisolone

Prednisolone use over a chronic period is associated with weight gain and skin thinning, rather than the hyperpigmentation seen here.

E	Flucloxacillin

Flucloxacillin is associated with non-specific skin rashes, urticarial and purpura, rather than the blue/black/grey discoloration seen here.

38528

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Difficulty: Easy

This 24-year-old man presents to his General Practitioner (GP) as he is distressed by his appearance. He has recently started gaining weight and being easily fatigable.

Dr. Jamil Alrajhi

Apr 6, 2025

Which of the following is the most appropriate way to manage this patient?

Your answer was incorrect

A	Thyroid function tests (TFTs)
B	Oral griseofulvin
C	Oral antibiotics
D	Ketoconazole shampoo
E	Topical minoxidil

Explanation

A	Thyroid function tests (TFTs)

The answer is Thyroid function tests (TFTs) (Option A).

This is alopecia areata (AA), which is associated with other autoimmune diseases such as Hashimoto's thyroiditis (hence the importance of checking the TFTs), vitiligo and myasthenia gravis. Currently, no curative treatment is available, but the condition may spontaneously remit. Systemic and topical steroids may induce remission but do not alter the long-term outcome. Topical minoxidil may also be effective in some cases. Patients often find this condition very distressing, and psychological support from family, doctors and support groups is extremely important.

D	Ketoconazole shampoo

Ketoconazole shampoo (Option D) is incorrect.

This is widely used against seborrhoeic dermatitis.

B	Oral griseofulvin

Oral griseofulvin (Option B) is incorrect.

The differential diagnosis of annular alopecia includes tinea capitis. Treatment is with antifungals such as griseofulvin.

C	Oral antibiotics

Oral antibiotics (Option C) is incorrect.

Antibiotics are not used against AA.

E	Topical minoxidil

Topical minoxidil (Option E) is incorrect.

Topical minoxidil may be of limited help against male pattern baldness.

33395

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Difficulty: Easy

A 34-year-old woman is seen in the Dermatology Clinic with a new rash. She complains that they can appear overnight and she can predict where the next lesion will appear. They are not itchy but can be mildly painful. Her GP has tried topical emollients and corticosteroids, but the lesions continue to appear. Her past medical history includes anxiety and emotionally unstable personality disorder and she regularly takes propranolol and clonazepam. On examination, she has a well-circumscribed circular-shaped lesion on her left forearm. There are no scaling or exfoliative changes, nor is there any blistering. There are multiple scars of a similar appearance, along with linear scars over both forearms and shins.

What is the most likely diagnosis?

Your answer was incorrect

A	Atopic eczema
B	Dermatitis artefacta
C	Erythema multiforme
D	Erythema nodosum
E	Psoriasis

Explanation

B	Dermatitis artefacta

This patient has a likely diagnosis of dermatitis artefacta. Dermatitis artefacta is a skin condition associated with self-inflicted injury from the patient. It is usually secondary to an underlying psychological condition, and the history of anxiety and emotionally unstable personality disorder increases the risk of such a condition. Patients may report that the lesions have ‘suddenly appeared’ or can ‘predict the next lesion’. The prevalence is more common in women and typical lesions are generally well-circumscribed lesions that have a geometric shape that does not fit a specific dermatological condition. Often the lesions will be found on areas of the skin that the patient can reach (eg forearms and legs).

E	Psoriasis

Psoriasis is a reasonable differential diagnosis, given that propranolol is a medication that can exacerbate symptoms of psoriasis. However, the presentation of psoriasis includes inflamed plaques and papules, with a silvery white scale over the extensor surfaces and scalp. However, the lack of scale or progression of lesions makes psoriasis unlikely.

A	Atopic eczema

Atopic eczema is an inflammatory skin disorder characterised by dry, exfoliative skin changes associated with erythema, scaling and pruritis. Although it is a common skin disorder, the findings on this patient's examination are not in keeping with eczema.

C	Erythema multiforme

Erythema multiforme is a self-limiting skin condition associated with annular erythematous skin lesions over the body surface. Typically, the lesions cover less than 10% of the total body surface area. Erythema multiforme is a hypersensitivity reaction and can be triggered by infections, medications and vaccinations. Although this patient has a circular lesion, it is currently only one lesion on the forearm, along with multiple scars of circular and linear shape. This makes dermatitis artefacta more likely the diagnosis.

D	Erythema nodosum

Erythema nodosum is a hypersensitivity reaction that causes tender and erythematous nodules to appear, most commonly over the shins. It is associated with arthralgia, fever and other underlying conditions, for example, inflammatory bowel disease or sarcoidosis. This does not fit with the patient's current presentation.

A 45-year-old man is unable to sleep because of an extremely itchy rash.

On examination in the Dermatology Clinic, he has violaceous, shiny, flat-topped papules on both wrists, which are particularly marked around an old scar on the flexor aspect of his right forearm.

He has recently commenced beta-blocker therapy for control of blood pressure (BP) and to help manage two recent episodes of paroxysmal SVT.

Which of the following is the most likely cause of his skin rash?

Your answer was incorrect

A	Guttate psoriasis
B	Lichen planus
C	Contact dermatitis
D	Lichen sclerosis
E	Eruptive xanthomatosis

Explanation

B	Lichen planus

Lichen planus (LP) characteristically affects flexor surfaces, particularly the wrists. There are fine, white streaks on the surface of the lesions if viewed through a hand lens (Wickham's striae). It demonstrates the Koebner phenomenon (as does psoriasis) – a linear pattern along scratch marks or scars. There are often asymptomatic lacy, white lesions in the buccal mucosa. Certain drugs may cause an LP-like eruption, particularly thiazides, β-blockers, phenothiazines, antimalarials and methyldopa. LP usually resolves spontaneously in a few months, but steroids may be required if pruritus is severe.

E	Eruptive xanthomatosis

Eruptive xanthomas occur on extensor surfaces and are associated with severe hypertriglyceridaemia.

A	Guttate psoriasis

Guttate psoriasis is associated with multiple plaques of psoriasis including over the upper body, rather than the limited skin disease seen here.

C	Contact dermatitis

Contact dermatitis is associated with a rash on skin exposed to the allergen, and hence it's most likely to occur on areas such as the hands.

D	Lichen sclerosis

Lichen sclerosis is an itchy scarring rash which most commonly affects the genital area and appears to occur more commonly in women.

9199

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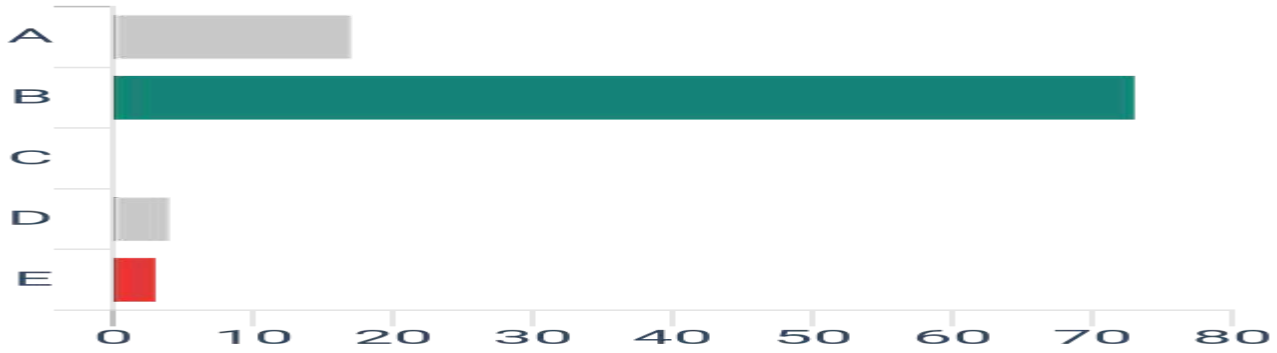

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A 45-year-old man presents to the Dermatology Clinic with a three month history of an exquisitely painful ulcer on his right shin. This started after an insect bite and rapidly developed into an ulcer. He has a background of inflammatory bowel disease. The other leg was entirely normal.

Which inflammatory cells are most likely to be seen in the ulcer on histological analysis?

Your answer was incorrect

A	Neutrophils
B	Lymphocytes
C	Eosinophils
D	Red blood cells
E	Basophils

Explanation

A	Neutrophils

The diagnosis is pyoderma gangrenosum, which is a neutrophilic dermatosis. Pyoderma gangrenosum is a type of ‘neutrophilic dermatosis’. These are conditions characterised by dense infiltrate of neutrophils in the affected tissue. They often arise as a reaction to an underlying systemic illness. They may arise at the site of injury, e.g. insect bite or needle prick. Other examples of neutrophilic dermatoses include Sweet syndrome, neutrophilic eccrine hidradenitis and erythema elevatum diutinum. Pyoderma gangrenosum is seen with increasing frequency in patients with inflammatory bowel disease.

D	Red blood cells

Haematoma formation with bleeding isn’t a primary feature of pyoderma gangrenosum, and red cells are unlikely to be a prominent feature of a biopsy taken from round the edge of a lesion.

B	Lymphocytes

Lymphocytic infiltration occurs in a number of other inflammatory dermatoses, including psoriasis and atopic dermatitis.

C	Eosinophils

Eosinophils are seen across a range of inflammatory skin diseases, including allergic drug eruptions, urticaria, allergic contact dermatitis, atopic dermatitis and eczema.

E	Basophils

Basophils are not a prominent feature of biopsy in inflammatory skin diseases.

39069

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Difficulty: Average

Dr. Jamil Alrajhi

Apr 6, 2025

A 45-year-old man with severe psoriasis which is refractory to treatment with topical steroids is commenced on ciclosporin therapy. He attends the Emergency Department (ED) with a lower respiratory tract infection (RTI).

Which of the following antibiotics should be avoided with respect to his treatment?

Your answer was incorrect

A	Cephalexin
B	Ciprofloxacin
C	Clarithromycin
D	Co-amoxiclav
E	Doxycycline

Explanation

C	Clarithromycin

Macrolide antibiotics can significantly increase ciclosporin concentration and may drive nephrotoxicity in some cases because of inhibition of CYP3A4. Erythromycin can increase ciclosporin exposure 4- to 7-fold, sometimes resulting in nephrotoxicity. Clarithromycin has been reported to double the exposure of ciclosporin. Azitromycin increases ciclosporin levels by around 20%.

E	Doxycycline

Doxycycline is excreted primarily in bile but does not interfere with drugs metabolised by the CYP 3A4 enzyme system.

A	Cephalexin

Cephalexin is renally excreted and has no interaction with the CYP3A4 enzyme system.

B	Ciprofloxacin

Ciprofloxacin is a weak inhibitor of CYP-1A2, which doesn't interfere with ciclosporin metabolism.

D	Co-amoxiclav

Co-amoxiclav is a penicillin and is therefore not metabolised via the P450 system.

38305

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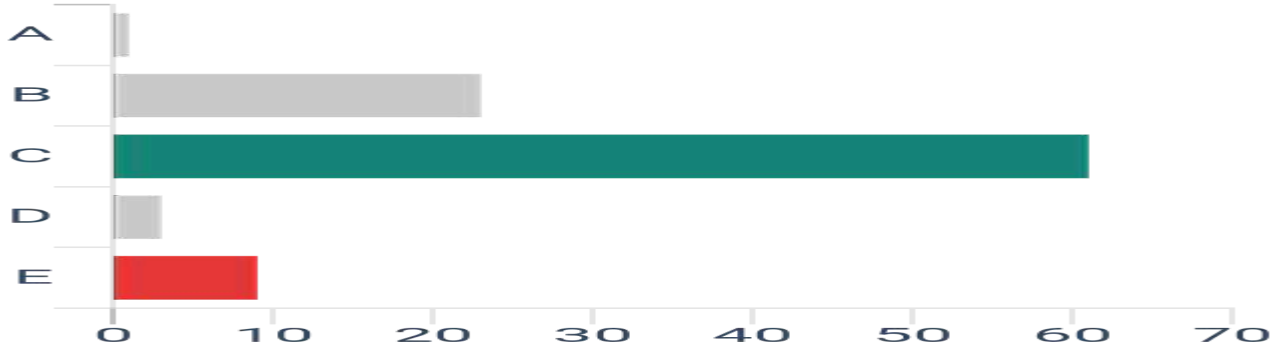

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External Links

A 37-year-old Turkish man is referred to the Dermatology Clinic by his General Practitioner (GP) with the 'warty' skin lesion seen below:

His girlfriend is worried that it has worsened over the last nine months. He feels that sometimes it completely clears up spontaneously. He has not tried any treatments. It has recently become itchy, and he has been finding sexual intercourse painful.

More recently, he has noticed an itchy lesion on the dorsum of his big toe, too.

What is the diagnosis?

Your answer was incorrect

A	Lichen planus
B	Lichen sclerosus
C	Psoriasis
D	Genital warts
E	Primary syphilis

Explanation

A	Lichen planus

Lichen planus is of unknown aetiology. Its association with autoimmune diseases, like vitiligo, alopecia areata and ulcerative colitis, suggests that it too can be mediated immunologically. Typical lesions are violaceous, intensely itchy, flat-topped papules arising on the extremities. The condition can affect the skin and genitalia. In 50% of patients, there are oral lesions, eg white, asymptomatic, lacy lines, dots or plaques. In 10% of patients, there are nail changes, eg longitudinal ridging and destruction of the nail bed. Potent topical steroids are the treatment of choice, but response is variable.

C	Psoriasis

Psoriasis can affect multiple body sites (extensor surfaces, scalp, nails), including the genital skin. Clinically, it is typified by the presence of erythema and scale. However, flexural psoriasis commonly present differently, with shiny, erythematous skin that lacks scaling.

B	Lichen sclerosus

Male genital lichen sclerosus is generally a disease of the uncircumcised, with the weight of evidence indicating that it is due to chronic, intermittent, occluded exposure of a susceptible epithelium to urine. Dyspareunia, itch and a rash are the predominant symptoms. Phimosis is common. Signs can range from subtle to florid and can manifest as shiny, sclerotic patches or patches with telangiectasia and sparse purpura. Circumcision is commonly required when treatment with topical super-potent steroids proves inadequate.

D	Genital warts

Warts can occur on any part of the anogenital area, including the urethra and anus. Unlike warts at other sites that may have a hard, keratinous surface, the genitals present as flesh-coloured papules that may coalesce to form plaques. A tiny black dot may be observed on the surface due to the presence intracorneal haemorrhage.

E	Primary syphilis

Primary syphilis presents with a painless papule and ulcerates (chancre). This heals over a period of 4–8 weeks without any treatment. Untreated syphilis is likely to then progress to the secondary stage with widespread rash and flu-like symptoms.

6290

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A 65-year-old woman, with multiple medical problems including ischaemic heart disease (IHD), chronic kidney disease (CKD), treated hypothyroidism, systemic lupus erythematosus (SLE) and a 60 pack/year smoking history, presents with exquisitely painful, necrotic ulcers on her abdomen, thighs and shins. She says that these ulcers usually begin as areas of blue/black discoloured skin before they break down. A diagnosis of calciphylaxis is confirmed.

Which of the following is the most important risk factor for development of her calciphylaxis?

Your answer was incorrect

A	Venous insufficiency
B	Chronic kidney disease
C	Smoking
D	Hypothyroidism
E	Systemic lupus erythematosus (SLE)

Explanation

B	Chronic kidney disease

Calciphylaxis is a life-threatening condition most often seen in late-stage chronic kidney disease on dialysis. Calcium deposits in the cutaneous arteries lead to thrombosis and ischaemic necrosis, with refractory ulcers often in the lower extremities, abdomen or buttocks.

E	Systemic lupus erythematosus (SLE)

Although SLE is associated with skin ulceration, with respect to calciphylaxis it is kidney disease that is the most important predisposing factor.

A	Venous insufficiency

Venous insufficiency is most strongly associated with varicose eczema and ulceration over the medial malleolus.

C	Smoking

Although smoking increases the risk of necrotic ulcer formation, it isn't the primary cause of calciphylaxis.

D	Hypothyroidism

Hypothyroidism may be associated with hair loss and skin oedema, but isn't associated with ulceration. 38311

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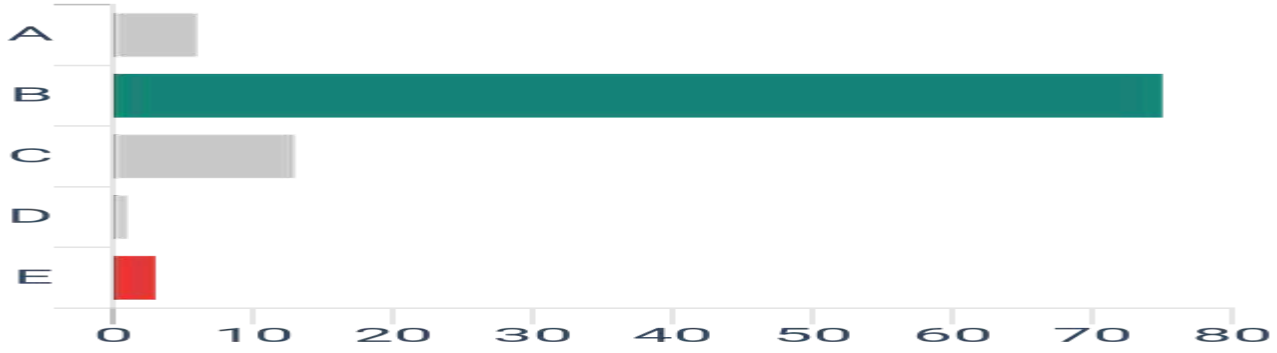

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Responses Incorrect:	120
Responses Total:	140
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A 32-year-old man is seen by his General Practitioner (GP) with a long history of anaemia. He denies haematemesis or melaena. His past medical history includes an episode of intussusception one year ago. He has been investigated previously with an upper gastrointestinal (GI) endoscopy and a colonoscopy, which are normal. Lower duodenal biopsies are normal. He has since been started on iron tablets.

On examination, the only significant findings are spots on his buccal mucosa and fingers,shown below.

Dr. Jamil Alrajhi

Apr 6, 2025

Investigations reveal the following:

Investigation	Result	Normal Value
Haemoglobin (Hb)	91 g/l	135–175 g/l
White cell count (WCC)	6.0×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	192×10^9/l	$150–400 \times 10^9$/l
Mean corpuscular volume (MCV)	71 fl	80–100 fl

Ferritin	3 µg/l	20–250 µg/l

A barium meal and follow-through is abnormal and an enteroscopy shows multiple hamartomatous polyps.

What is the most likely diagnosis?

Your answer was correct

A	Gardner syndrome
B	Peutz–Jeghers syndrome
C	Cowden syndrome
D	Familial adenomatosis polyposis
E	Pseudo-polyps

Explanation

B	Peutz–Jeghers syndrome

Perioral freckling is seen in Peutz–Jeghers syndrome. Other areas that may be affected by dark melanin flecks include the fingers, toes and perianal skin. It is an autosomal dominant condition with small intestinal hamartomas and an increased risk of gastrointestinal malignancies. It usually presents in the second or third decade of life and patients may develop anaemia or intussusception. Current surveillance recommendations include annual upper and lower endoscopy plus barium meal and follow-through.

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A	Gardner syndrome

Gardner syndrome is a form of familial adenomatosis polyposis with osteomas and neuromas. These can especially affect the skull. Like all familial adenomatosis polyposis, monitoring for malignancy is needed.

C	Cowden syndrome

Cowden syndrome is characterised by multiple hamartomas of the skin, mucous membranes, thyroid and breast, associated with hamartomatous polyps of the gastrointestinal and urinary tracts.

D	Familial adenomatosis polyposis

Familial adenomatosis polyposis (FAP) is associated with hundreds to thousands of colonic adenomas. This can cause rectal bleeding and anaemia, and may progress to malignancy. Serial monitoring with colonoscopy is needed.

E	Pseudo-polyps

Pseudo-polyps are projecting masses that occur from scar tissue following repeated healing in bowel ulceration. These can cause bowel obstruction, but not intussusception and would need an underlying inflammatory bowel diagnosis to qualify as a viable differential diagnosis.

7407

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A 45-year-old woman presents to her General Practitioner (GP) complaining of a 6-month history of fatigue and mild cough. More recently, she has noticed pain in her ankles, meaning that she struggles with her 1-mile walk to work. She also reports intermittent night sweats, which she has put down to approaching menopause. She is a non-smoker with no past medical history.

On examination, her blood pressure is 120/80 mmHg. Her heart rate is 80 bpm and regular. A rash is noticed over the front of her legs, which consists of red, tender nodules.

Her GP organises a chest X-ray:

What is the most likely diagnosis for this patient's skin rash?

Your answer was incorrect

A	Cutaneous lupus erythematosus
B	Erythema induratum
C	Erythema nodosum
D	Histoid leprosy

E	Traumatic panniculitis

Explanation

C	Erythema nodosum

Erythema nodosum is a type of panniculitis affecting the subcutaneous fat, which usually presents as red, tender nodules. They usually occur over the shins and are bilateral. They can be 3–20 cm in diameter and are commonly associated with joint pain and fever. This patient has also presented with symptoms of sarcoidosis (fatigue and cough) and has bilateral hilar lymphadenopathy on her chest X-ray. This patient has Löfgren syndrome – a triad of fever, bilateral hilar lymphadenopathy and erythema nodosum – which is an acute form of sarcoidosis. Treatment often involves non-steroidal anti-inflammatories, steroids and immunosuppressants. Compression socks can reduce swelling and discomfort of the erythema nodosum.

Image source: CC by Assoc Prof Craig Hacking, Radiopaedia.

D	Histoid leprosy

Histoid leprosy presents as multiple dome-shaped, skin-coloured to coppery-red papules and nodules which are present on the limbs and trunk. This is due to infection with Mycobacterium leprae which usually occurs in warm, wet areas in the tropics and subtropics. It is an infection of the skin and peripheral nerves, with the usual presenting symptom being numbness, initially to temperature sensation. The clinical signs and symptoms here of erythema nodosum, bilateral hilar lymphadenopathy and fever are in keeping with Löfgren syndrome, an acute form of sarcoidosis.

A	Cutaneous lupus erythematosus

Cutaneous lupus erythematosus is a type of connective tissue disease localised to the skin, which can be associated with systemic lupus erythematosus to varying degrees. Clinical features can include a malar butterfly rash localised to the face, diffuse or popular erythema over the face, trunk and limbs and discoid, scaly plaques on the ears, cheeks, nose and scalp. The rash in this scenario is not in keeping with cutaneous lupus erythematosus.

B	Erythema induratum

Erythema induratum, also known as nodular vasculitis, is a type of panniculitis often seen when there is poor circulation to the legs, eg in cold conditions, venous disease and hypertension. Nodules often occur with ulceration over the posterior calves. This patient's rash is affecting the anterior of her legs and she has no risk factors for nodular vasculitis.

E	Traumatic panniculitis

Traumatic panniculitis is an inflammatory condition of the subcutaneous fat, caused by physical or chemical agents. There may have been preceding blunt trauma or a cold injury. The degree of inflammation is usually not related to the degree of trauma. Usually, it presents as a subcutaneous painful plaque, nodule or an ill-defined mass with erythema. There is nothing in this patient's history to suggest that this is the diagnosis.

33406

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Erythema Nodosum

A 40-year-old man presents to his General Practitoner (GP) with an asymptomatic, rash of the dorsum of his foot.

On examination, he had multiple pin-point macules and ‘cayenne pepper spots’. He tells you he took part in a long-distance run a few days earlier.

What is the most likely pathology?

Your answer was incorrect

Dr. Jamil Alrajhi

Apr 6, 2025

A	Lipodermatosclerosis
B	Necrobiosis lipoidica

C	Capillaritis
D	Livedo reticularis
E	Erythromelalgia

Explanation

C	Capillaritis

Capillaritis (otherwise known as progressive pigmented purpura, or Schamberg's disease) can arise due to exercise, for no known cause, and due to venous insufficiency. It is asymptomatic and has no systemic associations. In this case it is likely to be due to the long-distance run and will resolve over a few days.

D	Livedo reticularis

Livedo reticularis occurs in a net-like, mottled pattern, is more marked in cold weather, and is seen on both upper and lower limbs.

A	Lipodermatosclerosis

Lipodermatosclerosis is painful indurated erythema and occurs in people with chronic venous insufficiency.

B	Necrobiosis lipoidica

Necrobiosis lipoidica consist of well-defined yellow plaques with telangiectasia, atrophic or ulcerated centre and a raised erythematous rim, associated with insulin dependent diabetes.

E	Erythromelalgia

Erythromelalgia is a painful, burning erythema associated with thrombocythaemia.

A 26-year-old woman, currently in the second trimester of pregnancy, presents to her General Practitioner (GP) with a lesion on her right thumb. This started to develop five weeks ago and has grown rapidly. She remembers getting her thumb caught on a rose bush in the garden. The lesion is not particularly painful, but is a nuisance as it gets caught on clothes and bleeds profusely.

What is the likely diagnosis?

Your answer was incorrect

A	Pyoderma gangrenosum
B	Pyogenic granuloma
C	Squamous cell carcinoma
D	Keloid scar
E	Viral wart

Explanation

B	Pyogenic granuloma

Pyogenic granuloma (PG) is a benign vascular skin tumour that commonly presents at the site of a penetrating injury. Pregnancy is a risk factor. There is a history of rapid growth on previously normal skin. A history of a ‘mole’ at the site, where the lesion arose should alert the clinician to the possibility of alternative diagnoses such as amelanotic malignant melanoma, is common. Commonly used options for treatment include curettage with cautery and cryotherapy.

E	Viral wart

The degree of protuberance seen here would be unusual for a viral wart, as would the speed of growth seen here over only 5 weeks.

A	Pyoderma gangrenosum

Pyoderma gangrenosum is a condition associated with the development of painful, ulcerated, necrotic lesions, seen on the legs and around surgical wounds.

C	Squamous cell carcinoma

Squamous cell carcinoma (SCC) is rarer and very unlikely to present in a young woman with type 6 skin (Fitzpatrick scale).

Fitzpatrick skin type classification:

Skin Type	Typical Features	Tanning Ability
1	Pale white skin, blue/hazel eyes, blonde/red hair	Always burns, does not tan
2	Fair skin, blue eyes	Burns easily, tans poorly
3	Darker white skin	Tans after initial burn
4	Light brown skin	Burns minimally, tans easily
5	Brown skin	Rarely burns, tans darkly easily
6	Dark brown or black skin	Never burns, always tans darkly

D	Keloid scar

Keloid scars don’t protrude and a significant increase in size wouldn’t be expected so long after the initial insult.

38521

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A 16-year-old girl is referred to the Dermatology Clinic. She is white but has paler skin compared to her parents and siblings. More recently, she has noticed a more significant deterioration in her vision and reports blurred vision and sensitivity to bright light. There is no past medical history or relevant family history of note.

On examination, she has global hypopigmentation of all skin surfaces. Her hair is extremely fair and her eyes are a blue–grey colour. There is noticeable nystagmus on testing eye movements and she experiences discomfort in testing pupillary responses to light.

What is the most likely diagnosis?

Your answer was incorrect

A	Albinism
B	Phenylketonuria
C	Pityriasis alba
D	Pityriasis versicolor
E	Vitiligo

Explanation

A	Albinism

This patient has a likely diagnosis of albinism. From the history and examination, she has globally pale skin with fair hair and pale eye colour that is associated with the condition. Furthermore, there are noticeable ocular changes including nystagmus and photosensitivity which are features of oculocutaneous albinism. Visual symptoms are often the most common presenting complaints for patients with albinism. Other ocular features include foveal hypoplasia, photophobia and strabismus. Oculocutaneous albinism is an autosomal-recessive inherited condition that causes a defect or absence of the enzymes involved in the melanin synthesis pathway. Therefore, the end result is global hypopigmentation secondary to the absence of melanin.

E	Vitiligo

Vitiligo is a reasonable differential diagnosis. Vitiligo is a hypopigmentation skin condition associated with underlying autoimmune conditions such as hypothyroidism and pernicious anaemia. The extent of skin involvement in vitiligo ranges from focal skin involvement to complete pigment loss. However, eye involvement is less common, particularly photophobia and nystagmus.

B	Phenylketonuria

Phenylketonuria is an autosomal-recessive condition secondary to an inborn error of amino-acid metabolism and leads to elevated phenylalanine levels. If this is left untreated, symptoms and signs include intellectual disability and seizures. In the UK, newborns are screened for this condition with the heel prick test. Dermatological changes include pale skin and eye colour. However, the absence of neurological features makes this diagnosis unlikely.

C	Pityriasis alba

Pityriasis alba is a hypopigmentation skin condition characterised by multiple small hypopigmented lesions over the face, neck, shoulders and upper arms. It is relatively asymptomatic and may resolve after puberty. It does not generally affect eye colour, and the presence of ocular symptoms suggests an alternative diagnosis, such as albinism.

D	Pityriasis versicolor

Pityriasis versicolor is a superficial fungal infection secondary to *Malassezia furfur*. It causes hypo- or hyperpigmented macules across the trunk and upper extremities. Infection is usually associated with warm and humid environments and oily skin. It would not cause global hyperpigmentation, as seen in this presentation.

A 73-year-old woman who has suffered a dense, left-sided hemiplegia is admitted to hosptial from the care home where she lives because the General Practitioner (GP) has noticed a severe sacral pressure ulcer.

On examination, you can see a stage 3 pressure ulcer with a great deal of exudative material.

Which of the following is the most appropriate management option?

Your answer was incorrect

A	Hydrocolloid dressing
B	Gauze dressing
C	Foam based dressing
D	Alginate based dressing
E	Leave the sore open to the air

Explanation

D	Alginate based dressing

This lady has exudate material within her pressure ulcer, and therefore she needs an absorptive dressing to avoid build-up of chronic exudate fluid which will affect wound healing. This is the most appropriate option as this dressing forms a gel when it comes into contact with the exudative material. Dressings serve to protect the wound from contamination and facilitate healing by absorbing exudate and protecting healing surfaces. Excess fluid causes wound maceration, while desiccation will slow epithelial cell migration. An absorptive dressing should be used to avoid build-up of chronic wound fluid that can macerate the wound and inhibit cell proliferation and wound healing.

E	Leave the sore open to the air

This will lead to an infection risk and potentially to a build-up of exudate material.

A	Hydrocolloid dressing

Hydrocolloid dressings are useful to prevent bacterial contamination, reduce friction and shear and encourage a moist environment for more rapid healing, but only when there is no substantial exudate. Desiccated wounds lack wound fluids, which provide tissue growth factors to facilitate re-epithelialisation. Healing of pressure-induced injuries is promoted by dressings that maintain a moist wound environment while keeping the surrounding intact skin dry. Choices for a dry wound include saline-moistened gauze, transparent films, hydrocolloids and hydrogels.

B	Gauze dressing

NICE has specifically mentioned that gauze dressing are not to be used to treat pressure ulcers in adults.

C	Foam based dressing

Foam-based dressing will absorb the exudate, but the alginate-based dressing will form a gel that is more likely to promote a warm, moist wound healing environment for grade 2-4 pressure ulcers (as suggested by NICE).

Wound management as advised by NICE:

Consider using a dressing for adults that promotes a warm, moist wound healing environment to treat grade 2, 3 and 4 pressure ulcers. Do not offer gauze dressings to treat a pressure ulcer in adults. Do not routinely use topical antiseptics or antimicrobials to treat a pressure ulcer in adults.

GENERAL CARE - The general approach to management of a patient with pressure ulcers should include the following.

- Reduce or eliminate underlying contributing factors by providing pressure redistribution with proper positioning and support surfaces.
- Provide appropriate local wound care, which may include debridement for patients with necrotic tissue, based on the ulcer's characteristics.
- Consider adjunctive therapies, such as negative pressure wound therapy.
- Monitor and document the patient's progress.
- Provide appropriate psychosocial support.

Reference:

Treatment of pressure ulcers: a systematic review. *JAMA* 2008 Dec 10;300(22):2647-2462. doi: 10.1001/jama.2008.778

A 36-year-old man is referred to the Dermatology Clinic by his General Practitioner (GP) with the lesion on his anterior shoulder shown below. He feels it is unsightly and that it may need to be removed.

When did the lesion most likely appear?

Dr. Jamil Alrajhi

Apr 6, 2025

Your answer was incorrect

A	At birth
B	At onset of puberty
C	In the last 2-3 years
D	Related to sun exposure in the last 10 years
E	Related to alcohol consumption

Explanation

B	At onset of puberty

This is a late onset epidermal naevus or birthmark, which occurs mainly in males and is triggered to develop in puberty by circulating androgens. The linear nature of the lesions with evidence of increased pigmentation/keratosis, is more typical of an adolescent onset lesion rather than one which presents at birth.

E	Related to alcohol consumption

Alcohol consumption and smoking have no impact on the growth of late onset epidermal naevi.

A	At birth

Congenital naevi identified at birth tend not to follow the linear pattern seen here, making the lesion less likely to have been present at birth.

C	In the last 2-3 years

As these lesions are related to the puberty related hormone surge and there is no evidence of use of unregulated androgens for body building, it's highly unlikely this man's naevus has worsened over the past 2-3 years.

D	Related to sun exposure in the last 10 years

Excessive skin exposure may result in development of a skin cancer, but the picture here is much more consistent with a benign epidermal naevus.

A 47-year-old man is referred to the Medical Clinic for investigation of microcytic anaemia. He has not noticed any symptoms of anaemia and no change to bowel habit, nor any change in his weight.

He has a past medical history of frequent epistaxis and asthma. He takes no regular medication but has a salbutamol inhaler.

A photograph of his lip is shown below:

What investigation would be most appropriate to establish an underlying diagnosis?

Your answer was correct

A	Computed tomography (CT) angiogram bowel
B	Clotting screen
C	Liver function tests
D	Anti-neutrophil cytoplasm antibodies
E	Human immunodeficiency virus (HIV) testing

Explanation

A	Computed tomography (CT) angiogram bowel

This patient has telangiectasia on his lips with a history of epistaxis, as well as microcytic anaemia suggestive of chronic blood loss. This makes the diagnosis of Osler–Weber–Rendu syndrome likely. It is necessary to use CT angiography, or MR angiography, to further identify lesions to establish a diagnosis. Osler–Weber–Rendu syndrome is also known as hereditary haemorrhagic telangiectasia, and is an autosomal dominant condition characterised by vascular dysplasia leading to telangiectasia, as well as increased frequency of arteriovenous malformations, particularly of the gastrointestinal tract, lungs, liver and brain.

B	Clotting screen

A clotting screen would be more likely to be helpful in diagnosis in a patient with a haemophilia. That would be been suggested by a history of easy bruising or bleeding, or spontaneous internal bleeding such as haemarthrosis.

C	Liver function tests

Liver function would be more useful if there were evidence of chronic liver failure or a cause of chronic liver disease. In patients with end-stage liver disease, there can be increased frequency towards bleeding and abnormal clotting. There can also be venous congestion, but this normally manifests as spider naevi.

D	Anti-neutrophil cytoplasm antibodies

Anti-neutrophil cytoplasm antibodies would be a useful first-line investigation in various autoimmune conditions, such as eosinophilic granulomatosis with polyangiitis or granulomatosis with polyangiitis. However, there is a lack of clinical features such as eosinophilia or kidney disease to suggest either diagnosis.

E	Human immunodeficiency virus (HIV) testing

This patient does not have any risk factors for HIV nor has any evidence of an acquired immune deficiency syndrome (AIDS)-defining illness. Had there been evidence of hairy cell leukoplakia then HIV testing would be an appropriate first-line investigation. This would have been suggested by white plaques on the sides of the tongue.

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An 18-year-old woman presents to the General Practitioner with recurrent episodes of skin lesions for the past six months. The patient was not on any medications and she used a barrier method for contraception.

On examination, there are multiple lesions which are thick, greasy, yellowish-white scales over the scalp, eyebrows, side of the nose and ears. There are no other lesions on other parts of the body.

Which of the following should be used to treat this condition?

Your answer was incorrect

A	Acitretin
B	Ciclosporin
C	Ivermectin
D	Selenium sulfide
E	Zinc emollients

Explanation

D	Selenium sulfide

This patient is likely suffering from seborrhoeic dermatitis. Selenium sulfide is a keratolytic and an antifungal agent and is used in the form of shampoos and stay-on lotions in the management of seborrhoeic dermatitis.

E	Zinc emollients

Zinc emollients are useful in relieving symptoms of eczematous skin conditions. They are not used to treat seborrhoeic dermatitis.

A	Acitretin

Acitretin is used in psoriasis (mainly pustular and erythrodermic variants). This patient has features characteristic of seborrhoeic dermatitis, so acitretin would not be appropriate here.

B	Ciclosporin

Ciclosporin is an immunosuppressant used in the management of diseases such as erythrodermic psoriasis. It is not used in the management of seborrhoeic dermatitis.

C	Ivermectin

Ivermectin is used in the management of scabies, which may present with vesicular or pustular lesions in the interdigital areas and associated with severe pruritus which worsens in the night.

72859

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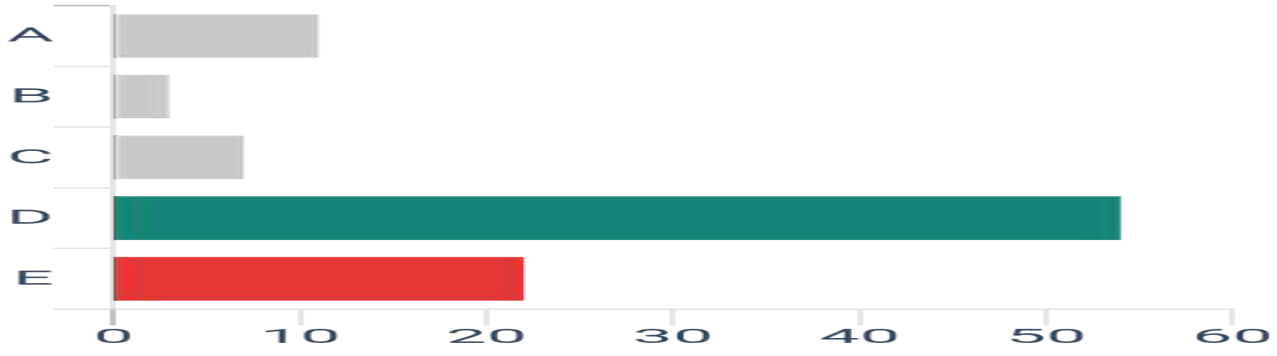

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You are called to see a 25-year-old man who was admitted to the Neurosurgery Ward almost two weeks ago for a neurosurgical procedure. He was started on carbamazepine post-operatively.

He is due to go home tomorrow, but today has been feeling unwell and is complaining that his skin has become red and painful. He has noticed some blistering on his arms over the last couple of hours and also reports soreness in the mouth.

In the last few hours, his pulse rate has increased to 130 beats per minute (bpm). His blood pressure (BP) is 105/62 mmHg. His temperature is 38.3 °C.

Which of the following is most likely to improve prognosis?

Your answer was incorrect

A	Intravenous (IV) hydrocortisone
B	Ciclosporin
C	Broad-spectrum antibiotics
D	Stopping carbamazepine
E	Oral prednisolone

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

D	Stopping carbamazepine

This presentation is suggestive of Stevens–Johnson syndrome (SJS) or toxic epidermal necrolysis (TEN) secondary to carbamazepine. SJS/TEN is a potentially life-threatening skin disorder which is almost always drug-induced. Common precipitants include anticonvulsants, sulfonamides and allopurinol. The HLA-B*1502 phenotype is associated with an increased risk of SJS/TEN from carbamazepine: Han Chinese and Thai individuals should be screened for this prior to initiation of the drug. SJS and TEN are seen as parts of the same disease: it is termed SJS in cases with up to 10% epidermal detachment, SJS/TEN overlap with 10–30% detachment and TEN with more than 30%. Key clinical features include confluent macular erythema and/or an exanthematous eruption, with areas or blistering or epidermal sloughing. Mucosal involvement is universal. Patients are usually very unwell and pyrexial. The affected skin tends to be painful rather than itchy.

The risk of death in patients with TEN can be accurately predicted by the toxic epidermal necrolysis-specific severity-of-illness score (SCORTEN). A score of 0–1 indicates a mortality risk of 3.2%; score of 2, 12.1%; score of 3, 35.3%; score of 4, 58.3%; and a score of 5 or more, 90%. Each of the following independent prognostic factors is given a score of 1: age greater than 40 years; heart rate greater than 120 beats per minute; cancer/haematological malignancy; involved body surface area greater than 10%; serum urea level of more than 10 mmol/l; serum bicarbonate level of less than 20 mmol/l; serum glucose level of more than 14 mmol/l.

The key initial management step is to stop any possible causative drugs. One observational study showed a reduction in mortality from 26 to 5% when the implicated drugs with short-elimination half-lives were withdrawn no later than the day the blisters or erosions first developed. The condition requires intensive therapy with nursing on air-fluidised mattresses, liberal application of greasy emollients, analgesia, fluid resuscitation, eye and mouth care, and nutritional support. This is usually best achieved on a Burns Unit, though some patients require ventilation on Intensive Care. The use of specific therapy, such as corticosteroids, antibiotics, ciclosporin and intravenous immunoglobulin, remains controversial in the absence of strong evidence.

E	Oral prednisolone

There is no clear evidence that oral corticosteroids are useful in SJS/TEN, and the key management step is to stop the causative drug.

A	Intravenous (IV) hydrocortisone

There is no clear evidence that parenteral corticosteroids are useful in SJS/TEN, and the key management step is to stop the causative drug.

B	Ciclosporin

There is no clear evidence that ciclosporin is useful in SJS/TEN, and the key management step is to stop the causative drug.

C	Broad-spectrum antibiotics

Whilst patients with SJS/TEN are susceptible to super-added infection, there is no evidence that prophylactic antibiotics affect prognosis and their use is not recommended. The key management step is to stop the causative drug.

A 36-year-old man presents to the Emergency Department (ED) with the following rash, which first appeared three days ago.

Which of the following is most associated with this skin rash?

Your answer was incorrect

A	Crohn's disease
B	Mycoplasma infection
C	Orf
D	Tuberculosis
E	Alcoholism

Explanation

B	Mycoplasma infection

This man has erythema multiforme. He shows the classical target lesions. These have three zones: a central area of dusky erythema, a middle paler zone of oedema and an outer erythematous ring. The lesions preferentially involve the extremities and trunk. They usually appear in successive crops and fade in 1–2 weeks.

There are multiple triggering factors, although the cause is not determined in up to 50% of cases. The most common association is with preceding herpes simplex or mycoplasma infection, although drugs such as sulphonamides and penicillins are also frequently implicated.

C	Orf

Orf is a parapox virus transmitted by sheep and goats; although it is a cause of erythema multiforme, it is a less common cause than mycoplasma infection.

A	Crohn’s disease

Crohn’s disease is associated with a number of skin manifestations, including erythema nodosum and pyoderma gangrenosum.

D	Tuberculosis

Like Crohn’s disease, tuberculosis is associated with erythema nodosum rather than the erythema multiforme seen here.

E	Alcoholism

Alcoholism is associated with guttate psoriasis, which leads to discrete erythematous scaling lesions rather than the target lesions seen here.

A 20-year-old man, who has just returned from holidays in Canada, presents to his General Practitioner (GP) as he has just developed the rash shown below. He tells you that he has been walking in the mountains, wearing shorts for most of his holiday:

Given the suspected diagnosis, what is the correct treatment choice if he feels otherwise well?

Your answer was correct

A	Clotrimazole cream
B	Topical beclomethasone cream
C	Oral ketoconazole
D	Oral doxycycline
E	Intravenous (IV) benzylpenicillin

Explanation

D	Oral doxycycline

The rash represents erythema chronicum migrans. This starts as a small papule and develops into a slow-enlarging ring with a raised border and central clearance. It is pathognomonic of Lyme disease and is caused by the spirochaete *Borrelia burgdorferi*.

A single dose of doxycycline 200 mg is effective prophylaxis after a tick bite if given within 72 hours. If not, 14–21 days of treatment is necessary.

A	Clotrimazole cream

Clotrimazole cream is an antifungal agent commonly used in the treatment of superficial fungal infections. This history here is not consistent with a a fungal infection.

B	Topical beclomethasone cream

Topical steroids do not have a role in the management of erythema chronicum migrans, which is the most likely diagnosis due to the characteristic rash seen here.

C	Oral ketoconazole

Like clotrimazole, this is an antifungal agent and would not be effective against Lyme disease, the most likely diagnosis due to the history and typical rash as seen here.

E	Intravenous (IV) benzylpenicillin

If the patient has any late complications (meningitis, cranial nerve palsies, heart block, arthropathy), then high-dose IV benzylpenicillin or cefotaxime is warranted.

A 68-year-old woman attends the Dermatology Outpatients Clinic with an enlarging, asymptomatic mole on her abdomen. She is otherwise fit and healthy and does not take any regular medications.

Examination revealed the lesion shown below.

What is the most appropriate management option in this case?

Your answer was incorrect

A	Re-assurance
B	Incisional biopsy through the centre of the lesion
C	Excisional biopsy with 5mm clinical margins

D	Excisional biopsy with at least 1 cm clinical margins
E	Excisional biopsy, followed by chemotherapy

Explanation

D	Excisional biopsy with at least 1 cm clinical margins

An excisional/complete biopsy of suspicious lesions with 1-3 mm margin of normal skin and extending to a depth to encompass the thickest portion of the lesion is the preferred technique and should be performed whenever possible. Narrow margin excision allows for the assessment of the entire lesion without compromising subsequent, wider surgery or potential staging with the sentinel lymph node biopsy technique. If melanoma is detected then further surgical resection is required.

For Melanoma in situ 0.5 to 1cm resection margin is recommended. For Melanoma, 1 cm resection margin if Breslow thickness < 1 mm , 1-2 cm margin if > 1 to 2 mm breslow thickness and > 2 cm margin if > 2 mm thickness is advised.

Image source: https://commons.wikimedia.org/wiki/File:Melanoma.jpg (https://commons.wikimedia.org/wiki/File:Melanoma.jpg) - Public domain

C	Excisional biopsy with 5mm clinical margins

Following histological diagnosis of a melanoma, further wide local excision is recommended with surgical margins dependant on Breslow thickness.

A	Re-assurance

The lesion displayed shows features suggestive of a melanoma (asymmetry, shape irregularity, multiple colours, diameter larger than 6mm, and associated with a history of growth) and should not be left untreated.

B	Incisional biopsy through the centre of the lesion

Suspicious lesions, such as the one shown here, need to be excised rather than sampled with incisional biopsy. However, sampling suspicious areas may be indicated in large lesions, particularly those on the face.

E	Excisional biopsy, followed by chemotherapy

Not all melanomas require treatment with chemotherapy. Management is variable and depends on Breslow thickness. Decisions should be taken by the local multidisciplinary team meeting. Patients with high-risk melanomas or those with evidence of local lymphadenopathy should be investigated with CT scanning and may be considered for treatment with chemotherapy or immunotherapy.

A 32-year-old man, who is known to suffer with anxiety and depression, presents to his General Practitioner (GP) with a chronic, intensely itchy, erythematous patch on his lower leg, shown below. He recognises and admits that the rash is more pronounced and painful after itching.

There are no other skin problems noted elsewhere, and he has no other significant health problems.

Routine bloods are unremarkable.

Dr. Jamil Alrajhi

Apr 6, 2025

What is the most likely diagnosis?

Your answer was incorrect

A	Dysmorphophobia
B	Delusional parasitosis
C	Lichen simplex et chronicus
D	Dermatitis artefacta

E	Shingles

Explanation

C	Lichen simplex et chronicus

Lichen simplex et chronicus occurs when the skin becomes thickened and leathery (lichenified) because of chronic rubbing – sometimes a stress related habit. It favours the calf, nape of the neck and vulval/peri-anal skin. The localised nature of this, coupled with the lack of other systemic features, further support the underlying diagnosis.

B	Delusional parasitosis

Delusional parasitosis is a fixed, false belief that there is an infestation with insect or parasite and is much more likely to result in generalised symptoms.

A	Dysmorphophobia

Dysmorphophobia is an altered perception of one's appearance and a belief that there is a flaw in appearance. In some cases, this may result in inappropriate plastic surgery to alter appearance.

D	Dermatitis artefacta

Dermatitis artefacta is associated with self-mutilation, usually denied by the patient, and may appear overnight.

E	Shingles

Shingles is an acutely painful vesicular rash, rather than the chronic itchy lesion seen here.

40085

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A 19-year-old woman presents to the Emergency Department with a 3-hour history of rectal bleeding and lower abdominal pain. There is no past medical history of note, although she reports that her mother used to have similar problems with rectal bleeding, requiring blood transfusions and hospitalisation.

The appearance of her mouth is shown below:

On colonoscopy, she is found to have multiple colonic polyps. An upper GI tract endoscopy reveals no significant abnormality.

How often should upper GI endoscopy be repeated in this patient?

Your answer was incorrect

A	6-monthly
B	Yearly
C	3-yearly
D	5-yearly

E	Only if she has symptoms

Explanation

C	3-yearly

The perioral pigmentation here is consistent with a diagnosis of Peutz–Jeghers syndrome. Peutz–Jeghers syndrome is caused by mutations in either the *SMAD4* or the *BMPR1A* gene, with *SMAD4* mutations less likely to lead to upper GI cancers. Current surveillance guidelines state that if an abnormality is found on either colonoscopy or upper GI endoscopy, both imaging studies should be repeated in three years.

B	Yearly

Yearly endoscopy is incorrect. Surveillance guidelines recommend that endoscopies and colonoscopies are repeated 3-yearly if polyps are found.

A	6-monthly

Even if polyps were identified on upper GI tract endoscopy, 6-monthly endoscopy is excessively frequent and may drive inappropriate use of resources while increasing patient anxiety.

D	5-yearly

Given the aetiology of Peutz–Jeghers syndrome, waiting for five years for repeat upper GI endoscopy risks the development of a gastric or oesophageal cancer in the intervening period.

E	Only if she has symptoms

Given the late presentation of upper GI cancers and the significant risk of tumour development in patients with Peutz–Jeghers syndrome, an expectant strategy is unacceptable.

71581

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An 18-year-old man was referred to the Immunology Department of a tertiary hospital with repeated episodes of intermittent facial flushing, diarrhoea and breathlessness for the past two years.

Physical examination revealed multiple polymorphic lesions over the trunk and limbs, which increased in size and became erythematous within minutes of rubbing, scratching or stroking. A picture of the patient's back is taken:

Investigation	Result	Normal value
Haemoglobin (Hb)	134 g/l	135–175 g/l
White cell count (WCC)	9.2× 10^9/l	4–11× 10^9/l
Neutrophils	6.2× 10^9/l	2.5–7.58× 10^9/l
Lymphocytes	2.8× 10^9/l	1.5–3.5× 10^9/l
Eosinophils	0.2× 10^9/l	0–0.4× 10^9/l
Platelet count	277× 10^9/l	150–400× 10^9/l
Total immunoglobulin E (IgE)	840 IU/ml	150–300 IU/ml

Serum tryptase	15 ng/ml	< 10 ng/ml

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Acne vulgaris
B	Cutaneous mastocytosis
C	Idiopathic urticaria
D	Juvenile xanthogranuloma
E	Solid mast cell tumours

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Cutaneous mastocytosis

The most likely diagnosis is mastocytosis and it frequently presents in young patients with the presence of polymorphic lesions of maculopapular cutaneous mastocytosis, known as urticaria pigmentosa. Some may experience flushing, nausea/vomiting or diarrhoea. Infants may have episodic blistering. These clinical features, along with an elevated IgE level and slightly raised serum tryptase level, are suggestive of cutaneous mastocytosis. There are no therapies that alter the natural course of cutaneous mastocytosis, and management involves avoiding triggers of mast cell degranulation, along with pharmacotherapy, for symptomatic relief. Annual monitoring is required, and abnormalities of complete blood count or elevation of serum tryptase level > 20 ng/ml should trigger an evaluation for systemic mastocytosis.

Image credit: CC BY-SA 4.0 Doc James.

https://commons.wikimedia.org/wiki/File:Mastocytosis2019.jpg

D	Juvenile xanthogranuloma

Juvenile xanthogranuloma presents as a reddish or yellowish to brown papule, plaque or nodule and is usually solitary.

A	Acne vulgaris

This patient's clinical presentation and laboratory evaluation are suggestive of cutaneous mastocytosis as acne vulgaris typically presents with comedones.

C	Idiopathic urticaria

The presence of pre-existing lesions, a positive Darier sign (increase in size of lesions with stroking) and slightly raised tryptase levels point towards a diagnosis of cutaneous mastocytosis.

E	Solid mast cell tumours

Solid mast cell tumours are extremely rare and usually have abnormalities in the WCC.

72856

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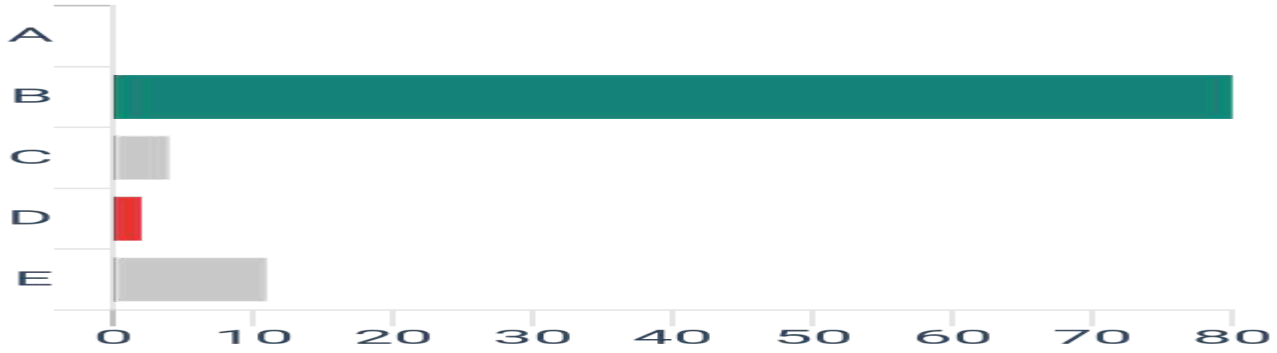

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Responses Correct:	23
Responses Incorrect:	133
Responses Total:	156
Responses - % Correct:	15%

A 76-year-old woman presents to the Emergency Department (ED) with intermittent pain over her upper left chest. She has suffered a weeping vesicular rash over the area for the past four days associated with a burning pain. There is a history of chicken pox infection as a child.

On examination, there is a well-demarcated rash consisting of dried-up crusted and healing vesicles, corresponding to one dermatome.

Which of the following options represents the most appropriate treatment in this patient?

Your answer was incorrect

A	Aciclovir ointment
B	Oral aciclovir
C	Oral valciclovir
D	Gabapentin
E	IV aciclovir

Explanation

D	Gabapentin

It is clear that this patient has suffered an unpleasant attack of Herpes zoster reactivation, also known as shingles. At this stage though, with crusting, dried-up and healing lesions there is no value in antiviral therapy. Gabapentin is a useful oral agent to block the pain associated with post-herpetic neuralgia; 300 mg daily is the most appropriate starting dose, with effective doses being from 900 mg upwards, and it can be increased up to 3.6 g/day. Alternatives include tricyclic anti-depressants and topical capsaicin cream.

E	IV aciclovir

This is most appropriate for HSV encephalitis. In HSV encephalitis there is spread from cranial nerve ganglia to frontal and temporal lobes, leading to headaches, behavioural change, fever, fits and headaches.

A	Aciclovir ointment

This is mostly useful against conjunctival varicella zoster, where there is dermatomal distribution within the trigeminal nerve and including the eye.

B	Oral aciclovir

Antiviral therapy should be administered in herpes zoster after 72 hours if new lesions are appearing at the time of presentation, as this indicates ongoing viral replication. However, the clinical utility of initiating antiviral therapy more than 72 hours after the onset of lesions in immunocompetent persons is unknown. There is likely minimal benefit of antiviral therapy in the patient who has lesions that have encrusted. Hence in this patient aciclovir will not be beneficial.

C	Oral valciclovir

Valciclovir is an alternative option to acyclovir, with good cover against herpes viruses.

33185

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Difficulty: Difficult

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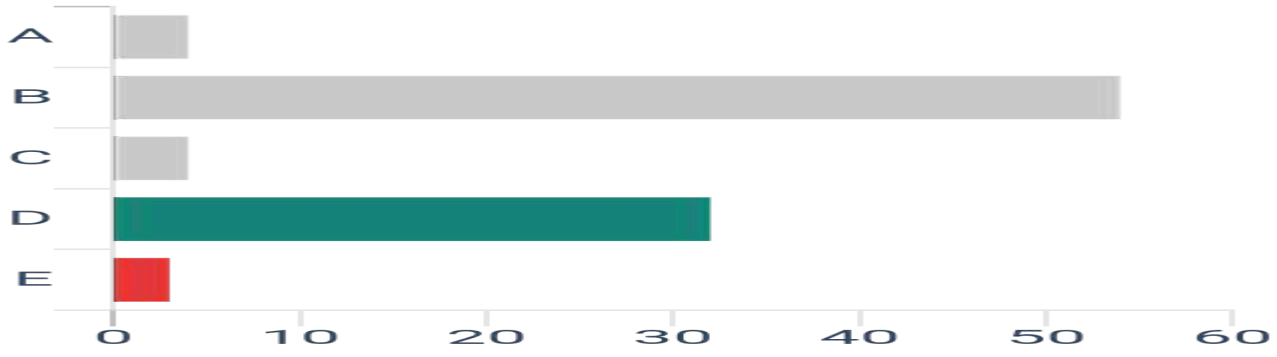

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23

A 19-year-old man attends the Dermatology Clinic with a nine month history of a lesion on the head of his penis. He is very embarrassed by the appearance. He says that he has a skin condition affecting various other parts of his body.

The lesion does not cause severe symptoms, but can be a little sore and itchy at times.

What is the most likely diagnosis?

Your answer was correct

A	Psoriasis
B	Discoid eczema
C	Lichen planus
D	Lichen sclerosus
E	Vitiligo

Explanation

A	Psoriasis

This condition is relatively common in the genital area. It gives rise to well-defined, erythematous scaly plaques. Eczema can appear very similar, though the discoid form tends to be very itchy. In this situation, skin changes should be sought elsewhere. A mild- or moderate-potency topical corticosteroid cream would be appropriate initial treatment on the genital area.

B	Discoid eczema

Whilst this also presents with well-defined, scaly plaques, it is unusual on the genital area and tends to be intensely pruritic.

C	Lichen planus

This condition classically presents with violaceous pruritic papules.

D	Lichen sclerosus

Urologists often refer to this condition as balanitis xerotica obliterans. It is usually confined to genital skin but almost never occurs after circumcision. It usually presents with pale, atrophic skin. Pruritus is variable; painful fissures may occur.

E	Vitiligo

Whilst the penis is a common site for this condition, it manifests as asymptomatic, depigmented macules. 6291

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Difficulty: Difficult

A General Practitioner (GP) has referred a 19-year-old man, a refugee, to the General Medical Clinic for an opinion.

The patient's use of English is limited and no obvious medical history is elicited from the patient. The patient is on no medication. The patient appears to be developmentally normal.

On examination, the patient is noted to be fair skinned with white hair, his eyes are shown below.

What is the most likely diagnosis?

Your answer was incorrect

A	Ocular albinism
B	Oculocutaneous albinism, type 1
C	Oculocutaneous albinism, type 3
D	Homocystinuria
E	Phenylketonuria

Explanation

B	Oculocutaneous albinism, type 1

Oculocutaneous albinism type 1 (OCA 1) presents with the complete absence of melanin in the hair, skin and eyes (subtype OCA 1A). As demonstrated in the image the eyes can have a pink hue to the irises and the eyelashes are white. Other symptoms and signs include photophobia, loss of visual acuity, and nystagmus. A different subgroup of OCA 1 (OCA 1B) can present with some pigmentation in these same tissues and therefore fewer eye problems. The remaining forms of oculocutaneous albinism reflect an increased presence of melanin in tissues.

Image source: https://commons.wikimedia.org/wiki/File:OCA1_Auge.jpg (https://commons.wikimedia.org/wiki/File:OCA1_Auge.jpg)

E	Phenylketonuria

Phenylketonuria is another inherited autosomal recessive condition characterised by a defect in the pathway of phenylalanine metabolism. Patients tend to be of fair hair and skin. This condition is now routinely screened for at birth and appropriate dietary restrictions implemented in order to avoid complications.

A	Ocular albinism

Albinism is a hypopigmentation disorder that results from a defect in the production of melanin. Types of albinism include: oculocutaneous albinism types 1–4, ocular albinism, Chediak–Higashi syndrome, Hermansky–Pudlak syndrome and Griscelli syndrome.

Ocular albinism patients usually have almost normal skin and hair colour. However, their skin and hair tend to be lighter than their siblings (this feature becomes particularly apparent in darker-skinned populations). Almost all of these patients have iris transillumination defects and present with congenital nystagmus that may be accompanied by reduced visual acuity, refractive errors, fundus hypopigmentation, lack of foveal reflex and strabismus.

C	Oculocutaneous albinism, type 3

Affected individuals typically have reddish hair, and blue or gray eyes.

D	Homocystinuria

Homocystinuria is an inherited autosomal recessive disorder resulting from defective methionine metabolism. These patients tend to have a typical physical appearance (long thin extremities, arachnodactyly, pale skin and hair), Unless the condition is diagnosed early and appropriate dietary restrictions started, patients develop a multitude of additional symptoms from early childhood (neurological, psychiatric, ocular, and cardiovascular).

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Previous Question

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Feedback

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Difficulty: Easy

A 25-year-old Indian student comes to the Dermatology Clinic for review. He has several hypopigmented areas on his lower limbs which were initially a few cm across but over time appear to have coalesced to form a larger area of de-pigmented skin, as shown below. The depigmentation appears to be non-scarring. He has no past medical history of note and takes no regular medication. The skin areas appear yellow-green in colour under Wood's light.

Which of the following is the most appropriate intervention?

Your answer was incorrect

Dr. Jamil Alrajhi

Apr 6, 2025

A	Oral Corticosteroids
B	Oral Terbinafine
C	Topical Corticosteroids
D	Topical Griseofulvin

E	Topical Ketoconazole

Explanation

C	Topical Corticosteroids

The answer is Topical Corticosteroids -

The most likely diagnosis is vitiligo, which shows blue-white or yellow-green under Wood's light. For limited disease on the body topical corticosteroids may be adequate, with topical calcineurin inhibitors an option where the response to steroids is poor. For patients with severe progressive disease, systemic therapies are an option, although the risks are usually thought to outweigh potential benefits.

Image source: https://commons.wikimedia.org/wiki/File:Vitiligo.jpg (https://commons.wikimedia.org/wiki/File:Vitiligo.jpg) - This file is licensed under the Creative Commons (https://en.wikipedia.org/wiki/en:Creative_Commons) Attribution-Share Alike 4.0 International (https://creativecommons.org/licenses/by-sa/4.0/), 3.0 Unported (https://creativecommons.org/licenses/by-sa/3.0/deed.en), 2.5 Generic (https://creativecommons.org/licenses/by-sa/2.5/deed.en), 2.0 Generic (https://creativecommons.org/licenses/by-sa/2.0/deed.en) and 1.0 Generic (https://creativecommons.org/licenses/by-sa/1.0/deed.en) license.

D	Topical Griseofulvin

Topical Griseofulvin, is incorrect, this is a treatment for tinea corporis, not the diagnosis here, because of the lack of skin scaling and the difference in colour under Wood's lamp.

A	Oral Corticosteroids

Oral Corticosteroids is incorrect, these are not indicated for limited vitiligo, the diagnosis here.

B	Oral Terbinafine

Oral Terbinafine is incorrect, it can be considered for tinea corporis, which looks blue-green, dull yellow or dull blue under Wood's lamp.

E	Topical Ketoconazole

Topical Ketoconazole is incorrect, this is a treatment for tinea corporis, not the diagnosis here, because of the lack of skin scaling and the difference in colour under Wood's lamp.

Rate this question:

A 23-year-old man presents to the General Practitioner with complaints of multiple swollen lesions over the groin, perianal region and axillae for the past six months. He gives a history of persistent discharge from his skin swellings. There was no prior history of anal intercourse or unsafe sexual practice. He did not give any previous history of surgery.

Physical examination of the axilla showed skin lesions, shown in the image below.

What is the first line of management for this patient?

Your answer was incorrect

A	Acitretin
B	Adalimumab
C	Dapsone
D	Oral clindamycin/rifampicin
E	Oral tetracycline

Explanation

E	Oral tetracycline

The location and characteristics of the skin lesions in this patient are suggestive of hidradenitis suppurativa. Oral tetracyclines, such as doxycycline or lymecycline, are used as first-line therapy for at least 12 weeks for people with hidradenitis suppurativa.

Image credit: CC BY-SA 4.0 Samuel Freire da Silva.

https://commons.wikimedia.org/wiki/File:Hidradenitis.png

D	Oral clindamycin/rifampicin

Combination treatment with oral clindamycin 300 mg twice daily and rifampicin 300 mg twice daily for 10–12 weeks is used in patients with hidradenitis suppurativa who are unresponsive to tetracyclines.

A	Acitretin

Acitretin is used in men with hidradenitis suppurativa who are unresponsive to antibiotic-based regimens. It should not be used in women of childbearing age due to its teratogenic potential.

B	Adalimumab

Adalimumab is used in people with moderate to severe hidradenitis suppurativa that is unresponsive to conventional therapy.

C	Dapsone

Dapsone is used in patients with hidradenitis suppurativa who are unresponsive to antibiotic-based therapies.

72858

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Previous Question

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Feedback

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Difficulty: Average

A 78-year-old woman presents to the Emergency Department (ED) with a one day history of a vesicular rash. It is intensely painful and she had been taking maximal paracetamol and ibuprofen tablets to no avail. There are no other areas of rash apart from this.

What is the most appropriate management choice?

Your answer was incorrect

A	Oral aciclovir
B	Oral opiates
C	Topical aciclovir

D	Topical clotrimazole
E	Topical hydrocortisone

Explanation

A	Oral aciclovir

The history and position of the rash is suggestive of shingles (herpes zoster). Due to her early presentation, oral aciclovir may help shorten the duration and severity of the episode. Initiation of antiviral therapy as early as possible in the course of acute zoster, and definitely within 72 h of onset, has been shown to be effective in alleviating acute pain and preventing post-herpetic neuralgia (PHN) in most patients.

Image source: https://commons.wikimedia.org/wiki/File:ShinglesDay1.jpg (https://commons.wikimedia.org/wiki/File:ShinglesDay1.jpg) - public domain

D	Topical clotrimazole

Clotrimazole is an anti-fungal agent; there is nothing in this patient's presentation to suggest that she has a fungal infection. Instead, her symptoms and signs are more consistent with shingles (herpes zoster) for which the appropriate treatment is oral aciclovir. Oral aciclovir has also been shown to reduce pain acutely and to help prevent PHN.

B	Oral opiates

This patient has signs and symptoms suggestive of shingles (herpes zoster). Opioid analgesia is unlikely to help with her pain, but treatment of the underlying condition with oral aciclovir can be effective in alleviating acute pain and it may prevent PHN.

C	Topical aciclovir

This patient does have shingles (herpes zoster), but oral, not topical, aciclovir is the appropriate treatment. Early treatment with oral aciclovir has been shown to reduce acute pain and help prevent post-herpetic neuralgia.

E	Topical hydrocortisone

Topical hydrocortisone can be useful in itchy skin conditions, but this patient has signs and symptoms suggestive of shingles (herpes zoster). Hydrocortisone would not be an appropriate treatment – instead oral aciclovir should be started, as this can both relieve acute pain and help to prevent PHN.

Rate this question:

A 23-year-old woman has recently emigrated to the UK from Romania. She presents for the first time to the Medical Clinic in the UK. She does not have a complete medical history but has been concerned by nodules on her back. These have been present for a long time but have not significantly bothered her.

She was separated from her family at a young age and so is unsure if any other family member has a similar problem. She has no medical history as far as she is aware. She has had one child, who is healthy. She does not take any regular tablets.

A photograph of the nodules on her back is shown below:

Further examination of her skin reveals no other abnormalities.

What would be the most appropriate step to help establish a diagnosis at this stage?

Your answer was incorrect

A	Computed tomography (CT) head
B	Magnetic resonance imaging (MRI) head
C	Slit lamp examination

Dr. Jamil Alrajhi
Apr 6, 2025

D	Human immunodeficiency virus (HIV) testing
E	Karyotyping

Explanation

C	Slit lamp examination

This patient likely has neurofibromatosis type 1 as there are multiple neurofibromas on her back. The lack of previous medical involvement explains the lack of a diagnosis at her age. There are seven cardinal clinical features of neurofibromatosis type 1 (NF-1) defined by the National Institutes of Health (NIH). These require two of the following features:

- café-au-lait spots: six or more of 15 mm in diameter
- neurofibromas: two or more
- axillary or inguinal freckling
- optic glioma
- Lisch nodules: two or more (slit lamp examination)
- osseous lesion
- family history: first-degree relative with established diagnosis.

Neurofibromatosis type 2 typically presents with progressively worsening hearing loss, tinnitus or balance problems, as well as tumours of the central nervous system. Neurofibromatosis type 2 is subtler than type 1 as there is greater paucity of café-au-lait spots and neurofibromas are less common. Lisch nodules may be seen with a direct ophthalmoscope if the nodules are large or numerous and the iris is light in colour, but the slit lamp is a more reliable way to distinguish Lisch nodules from iris nevi, which are not associated with NF1. These lesions are detected in fewer than 10 percent of affected children younger than six years of age but are seen in greater than 90 percent of adults.

D	Human immunodeficiency virus (HIV) testing

This patient has multiple neurofibromas. These are not due to immunosuppression, and the presence of them as chronic lesions reinforces that this is not due to opportunistic infection. If there had been widespread dermal tumour secondary to viral infection, such as multiple warts, then this would be appropriate.

A	Computed tomography (CT) head

Patients with neurofibromatosis type 1 are prone to several neurological complications. Patients can develop epilepsy, glial tumours and schwannomas. Abnormalities can be detected with CT, but this should be done in the presence of symptoms such as headaches or seizures.

B	Magnetic resonance imaging (MRI) head

An MRI of the brain would be more useful for the diagnosis of optic nerve glioma it allows visualization of the entire course of the optic nerve.

It also helps in the diagnosis of neurofibromatosis type 2 as this could help demonstrate unilateral or bilateral schwannomas. It would also be appropriate when assessing for other soft tissue lesions.

E	Karyotyping

Neurofibromatosis is not a disorder linked to chromosomal non-dysjunction, and therefore this would not be a useful investigation.

71629

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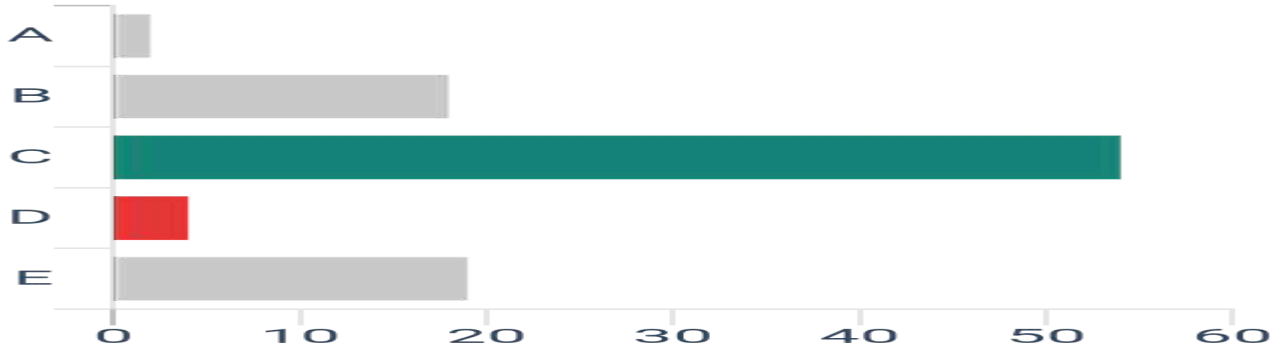

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Responses Correct:	24
Responses Incorrect:	139
Responses Total:	163

A 68-year-old man presents with scaly, erythematous plaques on the dorsal surfaces of his hands and feet and around his nose and ears. He reports these lesions have been slowly worsening over the past few months. He also describes unintentional weight loss and fatigue. Physical examination reveals hyperkeratotic, violaceous plaques on his distal extremities and perioral area. There are no other systemic symptoms or evidence of infection.

What is the underlying mechanism of acrokeratosis paraneoplastica?

Your answer was incorrect

A	Immune complex deposition in dermal blood vessels
B	Direct keratinocyte hyperproliferation due to viral infection
C	Paraneoplastic syndrome associated with squamous cell carcinoma of the upper digestive tract
D	Autoimmune attack on skin fibroblasts
E	Genetic mutation in the keratin gene

Explanation

C	Paraneoplastic syndrome associated with squamous cell carcinoma of the upper digestive tract

Acrokeratosis paraneoplastica, also known as Bazex syndrome, is a rare paraneoplastic syndrome strongly associated with squamous cell carcinomas of the upper digestive tract (eg pharynx, larynx, oesophagus). The skin findings are considered a response to tumour antigens. Recognition of this syndrome is important for early cancer detection, as skin findings may precede the diagnosis of malignancy by months.

E	Genetic mutation in the keratin gene

Genetic mutations in keratin genes can lead to conditions such as epidermolysis bullosa and other keratinopathies. However, acrokeratosis paraneoplastica is a paraneoplastic syndrome rather than a genetic skin disorder.

A	Immune complex deposition in dermal blood vessels

This mechanism is commonly seen in vasculitis but is not associated with acrokeratosis paraneoplastica, which is primarily a paraneoplastic phenomenon.

B	Direct keratinocyte hyperproliferation due to viral infection

Viral infections, such as those with human papillomavirus, can lead to hyperkeratotic skin lesions. However, acrokeratosis paraneoplastica is not due to viral infections or direct keratinocyte proliferation.

D	Autoimmune attack on skin fibroblasts

While autoimmune reactions can cause various skin manifestations, acrokeratosis paraneoplastica is not an autoimmune process targeting fibroblasts.

74418

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Dr. Jamil Alrajhi

Apr 6, 2025

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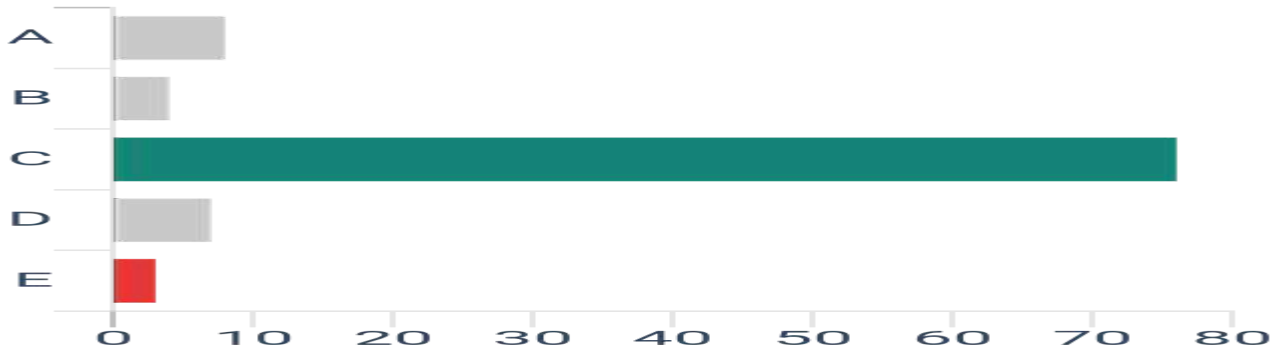

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Responses Correct:	24
Responses Incorrect:	140
Responses Total:	164

A 54-year-old man with severe, widespread, chronic plaque psoriasis and arthritis in both hands has failed to respond adequately to treatment with increasing doses of oral methotrexate.

He has previously failed treatment with phototherapy, cyclosporine and multiple topical agents.

Which of the following is the most appropriate treatment?

Your answer was incorrect

A	Switch to subcutaneous methotrexate
B	Switch to treatment with acitretin
C	Repeat course of phototherapy
D	Switch to adalimumab
E	Switch to oral prednisolone

Explanation

D	Switch to adalimumab

In severe plaque psoriasis, treatment with biologic agents is available in patients that have previously failed treatment with methotrexate, ciclosporin and phototherapy. Adalimumab is a biologic agent that has been used in the treatment of rheumatoid arthritis, inflammatory bowel disease, psoriasis and psoriatic arthritis. It acts as a TNF-α (tumour necrosis factor-alpha) antagonist with a good safety profile. However, TNF- α antagonists have been linked to a risk of reactivation of TB and therefore it is important to exclude cases of TB prior to commencing therapy. This is usually done with a chest X-ray and a quantiferon test.

E	Switch to oral prednisolone

Oral corticosteroids are commonly avoided in the treatment of psoriasis due the high likelihood of severe recurrence of symptoms after treatment is discontinued.

A	Switch to subcutaneous methotrexate

Subcutaneous methotrexate is thought to have comparable efficacy to that of oral methotrexate and is often used in an attempt to bypass the gastrointestinal side effects that can be associated by taking oral methotrexate.

B	Switch to treatment with acitretin

Acitretin is an oral retinoid (vitamin-A derivative) that is used in the treatment of severe psoriasis, and in particular pustular psoriasis, erythrodermic psoriasis and psoriasis affecting hands and feet. However, it is not effective against psoriatic arthritis and therefore an alternative agent should be sought in this particular instance.

C	Repeat course of phototherapy

This patient has previously failed to respond to phototherapy and therefore repeated courses are unlikely to mount an improved response.

8564

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Previous Question

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Difficulty: Easy

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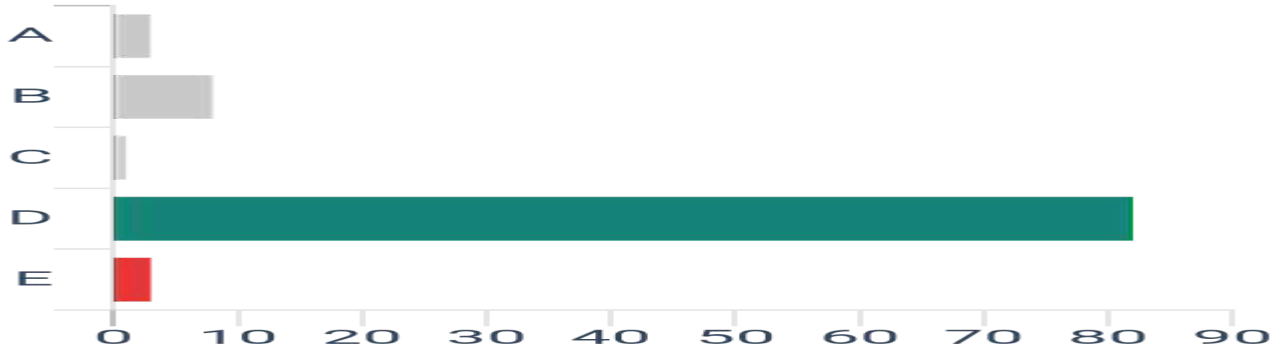

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Responses Correct:

24

A 22-year-old woman presents to the Emergency Department (ED) complaining of conjunctivitis affecting her left eye. Apparently, she has suffered from multiple episodes of red eye over the past few years, which correspond to periods of stress or when she is run-down.

The appearance of the eye is shown below. Fluorescein staining demonstrates a dendritic ulcer.

Which of the following is the most likely cause of her eye problem?

Your answer was incorrect

A	*Chlamydia trachomatis*
B	Herpes simplex infection

C	Herpes zoster infection
D	*Pseudomonas aeruginosa*
E	*Staphylococcus aureus*

Explanation

B	Herpes simplex infection

Recurrent conjunctivitis with formation of a dendritic ulcer raises the possibility of herpes simplex infection. The image shows small vesicles around the lid margin in keeping with the diagnosis. Where there is epithelial keratitis and ulcer formation, topical antivirals such as aciclovir are the usual initial intervention.

Image source: https://commons.wikimedia.org/wiki/File:Herpes_simplex_Lid.jpg (https://commons.wikimedia.org/wiki/File:Herpes_simplex_Lid.jpg) - This file is licensed under the Creative Commons (https://en.wikipedia.org/wiki/en:Creative_Commons) Attribution-Share Alike 3.0 Unported (https://creativecommons.org/licenses/by-sa/3.0/deed.en) license.

E	*Staphylococcus aureus*

Staphylococcal conjunctivitis may be milder than bacterial conjunctivitis caused by Gram-negative pathogens; dendritic ulcers are not seen as a feature of the condition.

A	*Chlamydia trachomatis*

Chlamydia leads to bacterial conjunctivitis rather than the picture here with ulcer formation.

C	Herpes zoster infection

Herpes zoster eye infection is associated with vesicle formation along the affected branch of the ophthalmic nerve, rather than infection being isolated to the eye.

D	*Pseudomonas aeruginosa*

Pseudomonas is a rare cause of bacterial conjunctivitis. It is an environmental pathogen and is usually only seen as a cause of conjunctivitis where there is an artificial implant within the eye.

Rate this question:

A 35-year-old man attends his General Practitioner (GP) as he is concerned about a rash on the back of his right leg. It has appeared slowly over a period of several months and is extremely itchy. He states that the rash has stopped him going to the gym lately as the itch is worsening. He is otherwise well, with a background of irritable bowel syndrome (IBS).

The rash, as shown, is also present on his upper arms and inside his mouth:

What is the most appropriate initial management step?

Your answer was correct

A	Commence oral dapsone
B	Commence topical coal tar ointment

C	Commence topical dermovate
D	Monitor the rash
E	Phototherapy

Explanation

C	Commence topical dermovate

This is **Lichen planus** (LP) as suggested by the white streaks on the surface of the plaques (Wickham's striae), in addition to its itchy nature and oral involvement. Mild forms of LP are self-limiting and resolve in 8 to 12 months. More severe cases, as suggested by mucosal, scalp and nail involvement, are rather difficult to treat, with ultra-potent topical steroids being used locally initially, often followed by courses of oral steroids.

A	Commence oral dapsone

With an itchy rash in a patient with bowel upset, it would be appropriate to consider dermatitis herpetiformis (DH). However, this usually presents with blistering, and regardless the initial treatment for DH would involve a gluten-free diet first. This rash here is more in keeping with lichen planus (LP).

B	Commence topical coal tar ointment

A widespread plaque rash may well be psoriasis; however, the white lines featured on this rash, in addition to the oral involvement, highly suggest LP. Psoriasis may be well treated with coal tar ointment, topical calcipotriol or phototherapy in the first instance.

D	Monitor the rash

While LP may well be managed conservatively without medication, this patient has significant LP which is impacting on his life. It would therefore be appropriate to treat with ultra-potent topical steroids and possibly oral agents thereafter.

E	Phototherapy

A widespread plaque rash may well be psoriasis; however, the white lines featured on this rash, in addition to the oral involvement, highly suggest LP. Psoriasis may be well treated with coal tar ointment, topical calcipotriol or phototherapy in the first instance.

A 23-year-old healthcare professional presents to her General Practitioner (GP) with an itchy, sore, erythematous rash affecting both palms and, less severely, on the dorsum of both hands. The skin shows evidence of lichenification with dry, leathery thickened areas and prominent skin markings. There is no rash elsewhere.

The rash appears to have worsened despite regular hand washing and application of emollients.

Which of the following is the most appropriate long-term intervention?

Your answer was incorrect

A	Oral corticosteroids
B	Referral to the occupational health department
C	Regular antihistamines
D	Patch testing
E	Topical corticosteroids

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Referral to the occupational health department

Irritant contact dermatitis is the most common form of occupational skin disease (up to 80%). Abrasives and cleaning agents (soaps, detergents and water-free hand cleansers as used often by medical workers) and excessive exposure to water are common causes in predisposed individuals – usually a history of atopic dermatitis. Management involves prevention (avoidance of irritant product/barrier creams, etc.) and treatment with topical corticosteroids and emollients. In this case, over the longer term it's likely that the most appropriate intervention is use of low-irritant washing materials and gloves, which could be obtained through the occupational health service

E	Topical corticosteroids

Topical steroids are appropriate in resolution of the rash, but aren't a long-term solution versus removal/identification of any potential trigger for the dermatitis.

A	Oral corticosteroids

Oral corticosteroids may be indicated to speed resolution of contact dermatitis, but only once any precipitant allergen has been removed.

C	Regular antihistamines

Regular antihistamines will not resolve any dermatitis, but will affect the scratch–itch cycle.

D	Patch testing

Patch testing may be performed if there is uncertainty about the allergen, but must be done in an unaffected area and at least 2 weeks after the dermatitis has subsided.

9200

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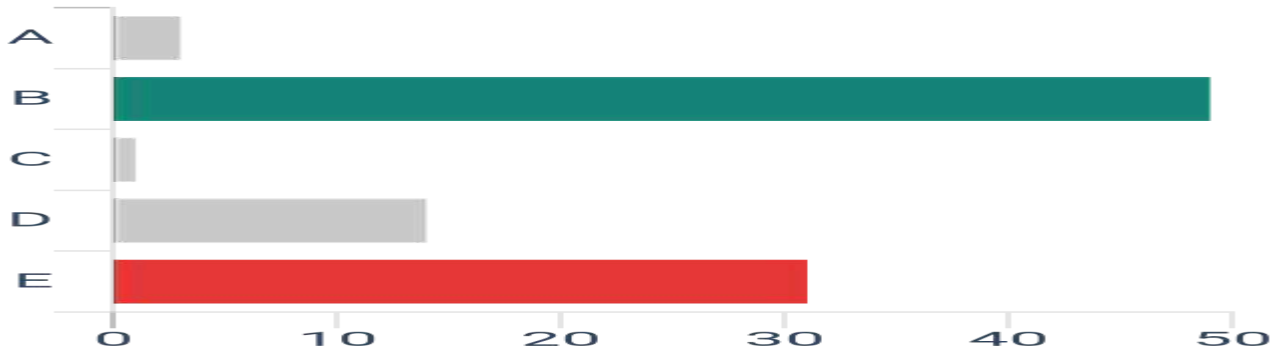

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Responses Incorrect:	143

A 35-year-old woman is reviewed by her General Practitioner (GP) with a recent history of unusual-looking, excoriated marks on her shins. The lesions had appeared suddenly, were clearly demarcated from the surrounding normal skin, and had a geometric pattern.

Her family had urged her to seek medical input regarding the lesions; however, the patient herself had not noticed them before and reported them as being asymptomatic.

The patient is unemployed and lives alone. She is always at home, does not seem to socialise and appears to have very few friends.

What would be the most likely diagnosis in this case?

Your answer was incorrect

A	Atopic dermatitis
B	Dermatitis artefacta
C	Scabies
D	Lichen planus
E	Urticaria

Explanation

B	Dermatitis artefacta

Dermatitis artefacta is a condition where the skin lesions are self-inflicted and tend to be on exposed skin that is readily accessible to the patient's hands. It may be due to an underlying psychological problem, a form of emotional release from distressful situations, or attention-seeking behaviour particularly when the patient is socially isolated. It is more common in women than in men. The lesions tend to have unusual shapes and a linear or geometric pattern. They are well demarcated and of sudden onset. Different methods may be used to injure the skin (nails, caustic soda, cigarettes).

E	Urticaria

Urticaria is a skin disease that causes itchy wheals (hives) and/or angioedema (mucosal swelling). It can be classified as spontaneous or inducible. Common causes of inducible Urticaria include heat, pressure, sunshine and cold.

A	Atopic dermatitis

Atopic dermatitis (also known as eczema) is a chronic, itchy condition that occurs due to complex genetic and environmental factors and is associated with other forms of atopy such as hay fever and asthma. It typically affects flexural skin leading to inflamed, dry and erythematous lesions, often showing signs of excoriation. Atopic dermatitis commonly presents in childhood but can also affect patients of any age.

C	Scabies

Scabies is an infection of the skin with the microscopic mite Sarcoptes scabei. Scabies spreads rapidly under crowded conditions where there is frequent skin-to-skin contact between people. Lesions are linear and typically found in the webbing between the fingers and the skin folds on the wrist, elbow or knee. The rash is intensely itchy, especially at night.

D	Lichen planus

Lichen planus is an inflammatory cutaneous disorder of unknown aetiology. It causes itchy, polygonal, violaceous plaques which are often crossed by white lines (Wickham striae).

7614

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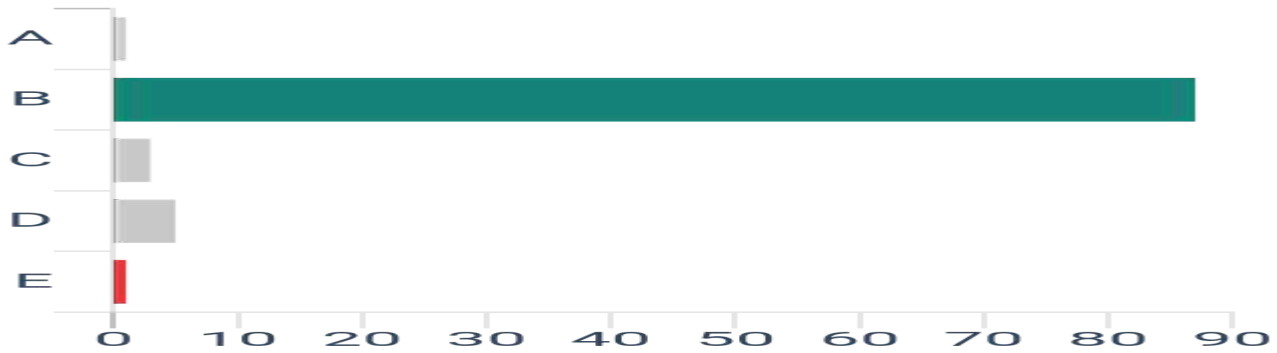

A 54-year-old man comes to the Dermatology Clinic for review. He has suffered from an increasingly troublesome rash over the past few months. He has a symmetrical, erythematous scaly rash affecting the fingers, hands, feet, his nose and the helices of the ears. There is also nail dystrophy with horizontal and vertical ridging.

On further questioning, he admits to problems with indigestion and food sticking, that he puts down to drinking too much whisky and smoking 10 cigarettes per day.

Which of the following is he most likely to have?

Your answer was correct

A	Gastric carcinoma
B	Nasopharyngeal carcinoma
C	Small cell lung cancer
D	Squamous cell lung cancer
E	Squamous cell oesophageal carcinoma

Explanation

E	Squamous cell oesophageal carcinoma

A widespread psoriatic-type rash involving the ears is suggestive of acrokeratosis paraneoplastica. Most acrokeratosis paraneoplastica cases are associated with squamous cell carcinoma of the upper one third of the respiratory or GI tract, i.e. the oropharynx, larynx, lungs or oesophagus. The symptoms of indigestion and food sticking fit best with a diagnosis of oesophageal carcinoma.

A	Gastric carcinoma

Acrokeratosis paraneoplastica is not usually associated with gastric carcinoma. Gastric carcinoma is associated with acanthosis nigricans.

B	Nasopharyngeal carcinoma

Nasopharyngeal carcinoma is primarily associated with symptoms of upper airway/nasal obstruction rather than symptoms of food sticking.

C	Small cell lung cancer

SIADH is the main paraneoplastic phenomenon associated with small cell lung cancer.

D	Squamous cell lung cancer

Squamous cell lung cancer is associated with acrokeratosis paraneoplastica, but the food sticking fits better with a primary oesophageal tumour.

38309

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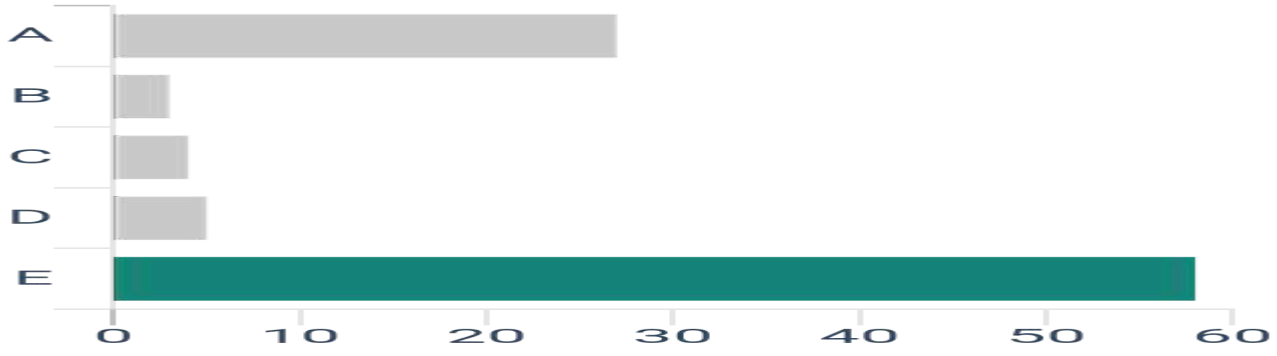
Difficulty: Average

Peer Responses %



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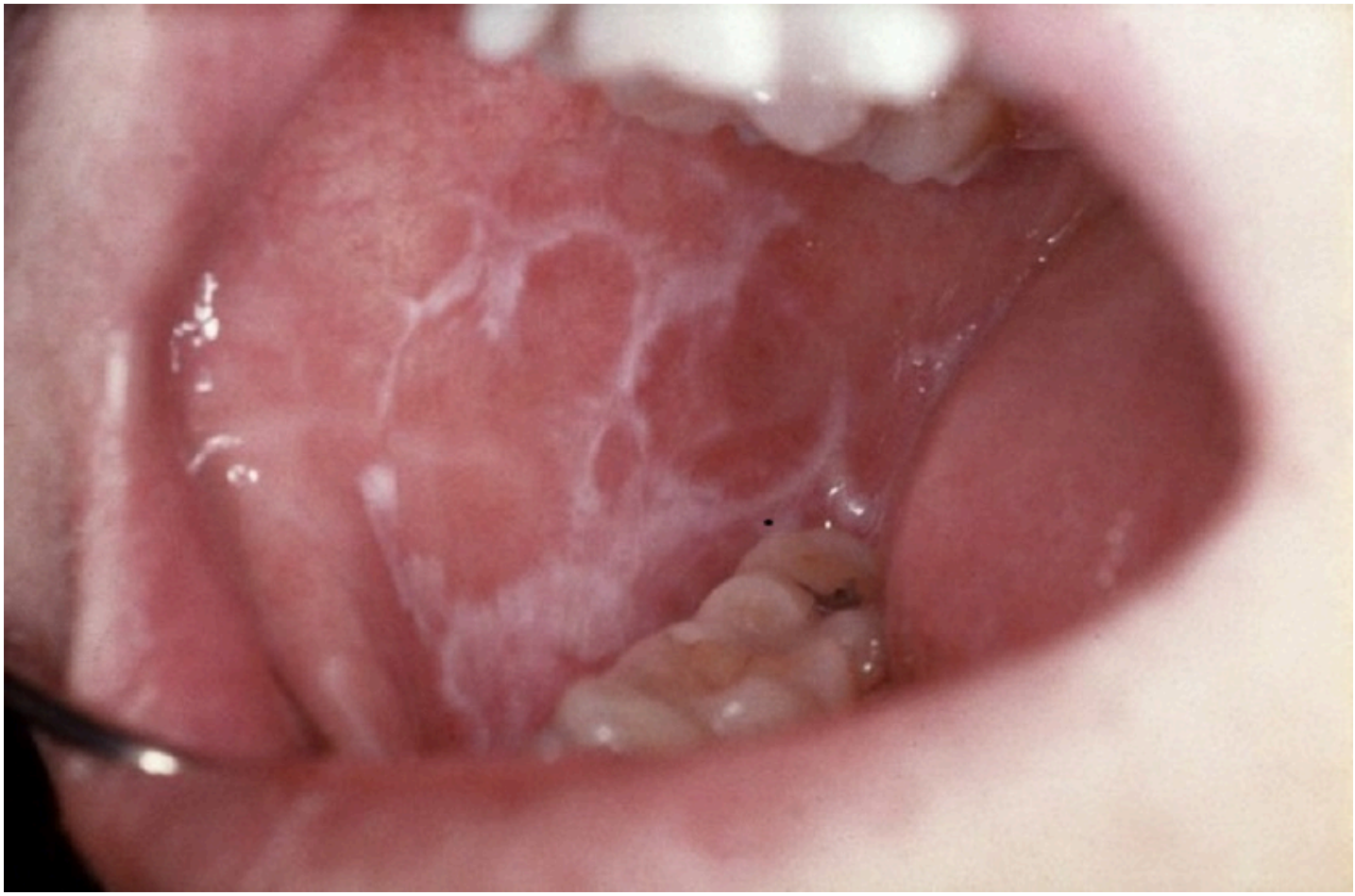
Responses Correct:	26
Responses Incorrect:	144
Responses Total:	170
Responses - % Correct:	15%

A 32-year-woman presents to the Dermatology Clinic due to pain on the inside of her cheeks and tenderness of her gums. A visit to her Dentist did not reveal any problems with her dental health. Her symptoms have been getting worse over a period of a few weeks.

She has been systemically well without any other medical problems but has been under increased stress at work.

A photograph of the inside of her mouth is shown below:



No other dermatological involvement can be found.

What is the most appropriate management plan?

Your answer was incorrect

A	Aciclovir
B	Anti-retroviral treatment

Dr. Jamil Alrajhi
Apr 6, 2025

C	Topical retinoids
D	Oral corticosteroids
E	Topical corticosteroids

Explanation

E	Topical corticosteroids

This patient has lichen planus with oral involvement only. The image shows white streaks in a fern-like pattern which is very distinctive of lichen planus. Other oral features of the condition include painful and persistent erosions and ulcers, as well as diffusely red and tender gums. Cutaneous lichen planus is characterised by violaceous polygonal plaques which can show Wickham's striae, white lines crossing them, or hypertrophic plaques. Diagnosis is usually by biopsy. Management is topical steroids as first-line treatment, topical calcineurin inhibitors as second-line, and oral steroids with immunosuppression for systemic illness.

C	Topical retinoids

Topical retinoids would be considered a second-line treatment for lichen planus.

A	Aciclovir

Aciclovir can be used for infections such as the herpes simplex virus in the early stages. However, this presents as very painful cold sores rather than the presentation seen above.

B	Anti-retroviral treatment

This would be appropriate if the image demonstrated an acquired immune deficiency syndrome (AIDS)-defining illness suggestive of underlying human immunodeficiency virus (HIV). In terms of oral lesions, this could be widespread oral thrush and oral hairy cell leukoplakia, but this appears as white lesions on the side of the tongue, like a film that will not come off despite rubbing it.

D	Oral corticosteroids

Oral corticosteroids are reserved for severe or systemic lichen planus and should be used in conjunction with a disease-modifying treatment or therapy to help maintain remission.

Rate this question:

A 25-year-old woman, who is currently breast-feeding, is prescribed prednisolone for a particularly severe flare of her eczema.

Which of the following is the correct advice with respect to her breast feeding?

Your answer was incorrect

A	Prednisolone is not excreted in breast milk so there is no concern
B	The infant should always be monitored for signs of adrenal suppression
C	Doses of less than 40 mg prednisolone per day are likely to be safe
D	She must not breast-feed
E	Prednisolone must be restricted to doses of less than 20 mg per day

Explanation

C	Doses of less than 40 mg prednisolone per day are likely to be safe

The BNF states that doses of up to 40 mg daily are unlikely to cause systemic effects in the infants of breast-feeding mothers, but infants of mothers taking daily doses higher than 40 mg should be monitored for signs of steroid withdrawal.

E	Prednisolone must be restricted to doses of less than 20 mg per day

Doses of up to 40 mg per day are unlikely to cause a significant problem with respect to breast-feeding.

A	Prednisolone is not excreted in breast milk so there is no concern

Doses above 40 mg per day may be secreted in significant quantities in breast milk, and caution therefore with respect to high dose corticosteroids is advised.

B	The infant should always be monitored for signs of adrenal suppression

Infants should be monitored for signs of steroid withdrawal in the event that doses above 40 mg per day are used.

D	She must not breast-feed

Breast feeding is only of significant concern when doses of prednisolone greater than 40 mg per day, hence breast feeding may well be safe for the majority of patients taking prednisolone.

38316

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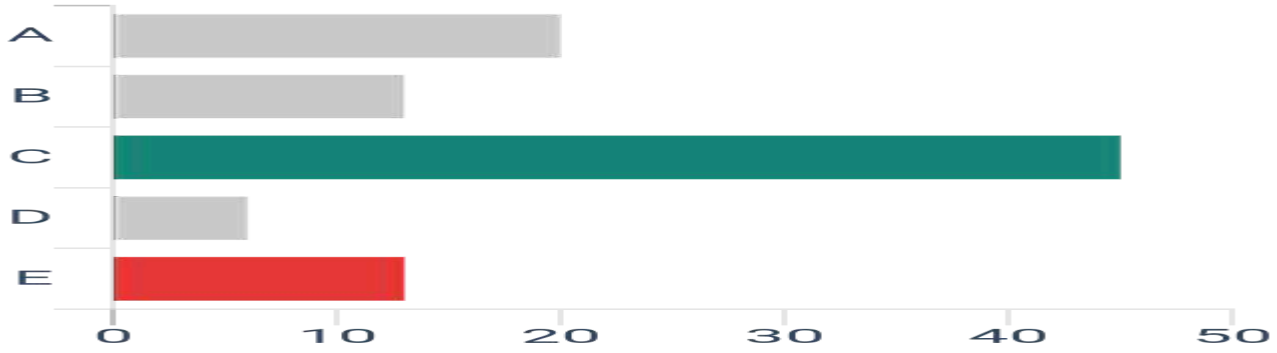

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Responses Incorrect:	146
Responses Total:	172
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Atopic Dermatitis and Eczema

A 52 year old man comes to the Dermatology Clinic for review. He has severe psoriasis which has failed to respond adequately to topical steroids, calcipotriol and acitretin.

On examination of his hands, you note nail pitting and evidence of distal inflammatory arthritis. His back and arms are shown below:

Which of the following is the most appropriate next step?

Your answer was incorrect

A	Oral prednisolone
B	Oral methotrexate
C	Subcutaneous infliximab
D	Oral cyclosporine
E	Oral azathioprine

Explanation

B	Oral methotrexate

Methotrexate is the next intervention of choice for this patient's severe psoriasis, especially as it is thought to be useful in delaying progression of psoriatic arthritis.It is the arthritis which drives us more towards methotrexate as the next intervention.

C	Subcutaneous infliximab

Biologicals targeting TNF-alpha, such as infliximab are the intervention of choice where control of psoriasis isn't gained with a typical second line agent.

A	Oral prednisolone

Oral prednisolone may impact on the inflammatory component of psoriasis, although the benefit risk of systemic steroids isn't favourable versus other potential second line agents such as methotrexate.

D	Oral cyclosporine

Oral cyclosporine is more commonly used in the treatment of atopic dermatitis which fails to respond to corticosteroids alone.

E	Oral azathioprine

Azathioprine is an alternative agent to methotrexate for the treatment of psoriasis but may be less effective in managing psoriatic arthritis.

39092

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Difficulty: Easy

A 32-year-old man attends the Dermatology Clinic for review as he has become troubled by itchy new lesions on his hands. These have progressed over a period of several weeks. He has had flares of eczema since he was a child, and these have decreased in frequency since.

He currently applies emollient four times each day and is not using any topical steroids. He works in human resources and, as far as he is aware, has not been exposed to any new substances.

A photograph of his hand is shown below:

What is the most appropriate management plan?

Your answer was incorrect

A	Oral prednisolone
B	Coal tar
C	Start methotrexate
D	Start topical steroids and oral flucloxacillin

E	Increase emollient frequency and start topical steroids

Explanation

E	Increase emollient frequency and start topical steroids

This patient has a flare of atopic dermatitis of his hands. This is hyperkeratotic hand lesions of chronic palmar dermatitis. First-line management includes increasing emollient frequency to roughly 20 times per day, avoiding irritants such as soap and water, and wearing gloves. Topical steroids are the first-line treatment to help control these lesions.

A	Oral prednisolone

Systemic steroid therapy is an appropriate treatment for severe acute flares. With this patient, the extent of the rash is not extensive enough to need systemic steroids.

B	Coal tar

Coal-based preparations are useful for chronic plaque psoriasis and would not be suitable for this patient.

C	Start methotrexate

Methotrexate is indicated as an option for chronic intractable hand dermatitis. This patient has not yet been optimally managed on first-line therapy and therefore this option would be premature at this stage. Other options when steroids and emollients fail include azathioprine, ciclosporin, alitretinoin and phototherapy.

D	Start topical steroids and oral flucloxacillin

Antibiotics such as flucloxacillin should be used promptly, but only when there is clinical evidence of a secondary infection. This can be signs of local infection such as purulent discharge or purulent blisters, spreading erythema and tenderness, or can be systemic features such as fever, nausea and malaise.

71619

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Previous Question

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Feedback

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A 30-year-old man presents to the Dermatology Clinic with a new onset of an itchy rash over his torso. He noticed the rash shortly after returning home after a charity 10 km run. In the last few hours, he has noticed some worsening reddening and blistering over parts of the rash that he has been rubbing, to relieve the itch. There is a history of having a similar rash as a child. However, he cannot remember the exact diagnosis or treatment. He has no other known past medical history and is normally fit and well.

On examination, his observations are within normal limits. His rash is examined and is shown below:

What is the most likely diagnosis?

Your answer was incorrect

A	Guttate psoriasis
B	Henoch–Schönlein purpura
C	Mastocytosis
D	Pityriasis rosea

E	Urticaria

Explanation

C	Mastocytosis

This patient likely has mastocytosis, given the presence of a widespread purpuric rash associated with Darier sign. Darier sign refers to the acute reddening, swelling and blistering of lesions in mastocytosis (which is seen in this patient). Mastocytosis can be triggered by infections, heat, insect bites, drugs and alcohol and exercise. The recent 10 km run is a potential trigger for this patient's rash. The rash itself is a brown-coloured purpuric rash that tends to be itchy. It is important to note that mastocytosis can cause systemic symptoms secondary to the release of inflammatory mediators (eg flushing, vomiting, diarrhoea, abdominal pain and anaphylaxis).

Image source: By Doc James, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=81714414

E	Urticaria

Urticaria is a reasonable differential diagnosis, given the appearance of the rash with multiple discrete lesions. However, acute urticaria is usually allergic in nature and is associated with erythema, swelling and a wheal, neither of which are seen here. Instead, this patient has a widespread purpuric rash that acutely worsens when touched (Darier sign), which makes mastocytosis more likely.

A	Guttate psoriasis

Guttate psoriasis is a subtype of psoriasis that typically affects children and young adults following infection with *Streptococcus* species. The rash presents acutely with multiple small, teardrop-shaped and erythematous patches of skin appearing over the trunk and limbs. A differentiating factor between guttate psoriasis and pityriasis rosea is the presence of a scale within the lesion. Lesions in guttate psoriasis are typically scaly, whereas lesions in pityriasis rosea have a fine scale localised to the outermost edges. In contrast, this patient's rash has no signs of scale and, instead, appears purpuric.

B	Henoch–Schönlein purpura

Henoch–Schönlein purpura (HSP) is a type of immunoglobulin A vasculitis most commonly seen in children and young adults. Features include abdominal pain, arthralgia, glomerulonephritis and a purpuric rash over the buttocks and lower limbs. The presence of a purpuric rash on the trunk and absence of these additional features makes HSP very unlikely.

D	Pityriasis rosea

Pityriasis rosea is a self-limiting rash characterised by a large, round ‘herald patch’, usually found on the chest, abdomen or back. It mostly affects children and young adults and is thought to be precipitated by bacterial and viral infections (eg human herpes virus 6 and 7). The rash appears as multiple small, oval-shaped, red plaques that are located on the trunk that may have a classic ‘fir-tree appearance’. It does not accurately explain this patient’s rash.

73519

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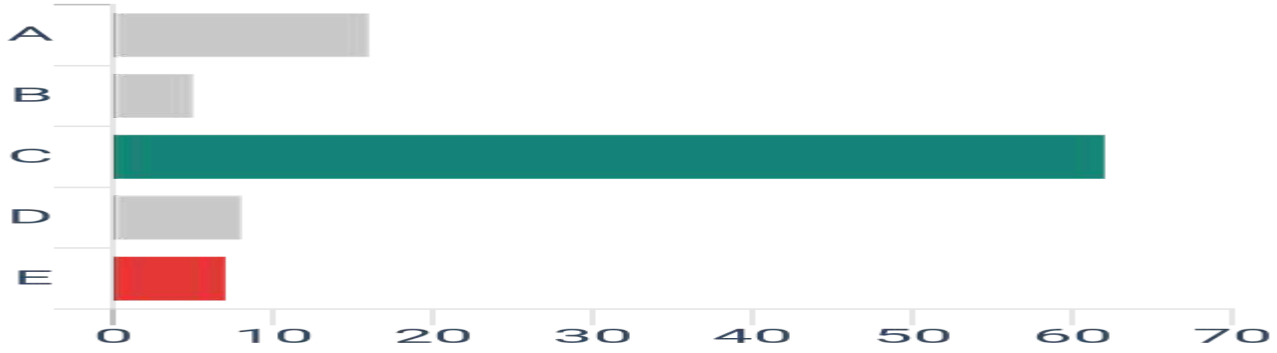

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Responses Incorrect:	149
Responses Total:	175
Responses - % Correct:	15%

A 33-year-old woman presents to the Dermatology Clinic with two day history of a generalised papular rash affecting her face, trunk, and arms.

Over the last 24 hours, she has been complaining of fever and swelling of her face. She was recently diagnosed with a brain tumour and is receiving radiotherapy at another hospital.

Her current medications include phenytoin, paroxetine, diazepam and lansoprazole.

On examination, her temperature is 37.9 °C. There are partially confluent papules on her trunk, upper arms and face, which blanch with pressure. There is some facial oedema and cervical lymphadenopathy.

Respiratory examination is unremarkable.

Neurological examination reveals the following:

Investigation	Result
Cranial nerves	Partial right-sided ptosis; lower R VII n palsy
Peripheral nervous system	Right lower limb weakness proximally; brisk reflexes throughout; right extensor plantar

Further investigations reveal the following:

Investigation	Result	Normal Value
Haemoglobin (Hb)	124 g/l	115–155 g/l
White cell count (WCC)	13.0 × 10^9/l	4.0–11.0 × 10^9/l
Platelets (PLT)	420 × 10^9/l	150–400 × 10^9/l
Sodium (Na^+)	132 mmol/l	135–145 mmol/l
Potassium (K^+)	4.9 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	125 µmol/l	50–120 µmol/l
Lymphocytes	4.0 × 10^9/l	1.5–3.5 × 10^9/l
Neutrophils	7.5 × 10^9/l	2.5–7.58 × 10^9/l
Eosinophils	0.7 × 10^9/l	< 0.4 × 10^9/l
Urea	6.9 mmol/l	2.5–6.5 mmol/l

What is the most likely diagnosis?

Your answer was incorrect

A	Bacterial meningitis
B	Erythema multiforme
C	Drug hypersensitivity syndrome
D	Fixed drug eruption
E	Toxic epidermal necrolysis

Explanation

C	Drug hypersensitivity syndrome

Also known as DRESS, drug hypersensitivity with eosinophilia and systemic symptoms, this is a serious hypersensitivity reaction pattern that tends to occur 3–6 weeks after commencing the causative drug. Well-recognised culprits include anticonvulsants, antimicrobials and dapsone. Clinical features include fever, facial oedema, a generalised exanthematous rash and lymphadenopathy. The liver and kidneys are the most common sites for extra-cutaneous involvement, though pneumonitis and myocarditis can also occur. Eosinophilia and atypical lymphocytosis occur. Drug hypersensitivity syndrome usually responds well to oral steroid treatment. It should be noted that in patients already taking steroids, the signs of drug hypersensitivity may be masked to some degree.

D	Fixed drug eruption

This leads to one or more discrete macules or plaques, sometimes with central blistering, following exposure to the causative drug; on re-challenge, the lesions reappear at exactly the same site.

A	Bacterial meningitis

One would expect symptoms and signs such as headache, neck stiffness and photophobia in true meningitis, and the classical associated rash is purpuric. It should be noted that meningococcal septicaemia may present without meningitis with a much less specific rash. A high fever and neutrophilia would be expected to accompany this.

B	Erythema multiforme

This presents with target lesions mostly at acral sites. It commonly affects the oral mucosa. It is a reactive condition but is most closely associated with infection rather than a drug cause.

E	Toxic epidermal necrolysis

This is the most severe form of drug eruption and leads to extensive skin loss with mucosal involvement. Whilst anticonvulsants are one of the most common precipitants, the clinical picture does not fit with this diagnosis.

6293

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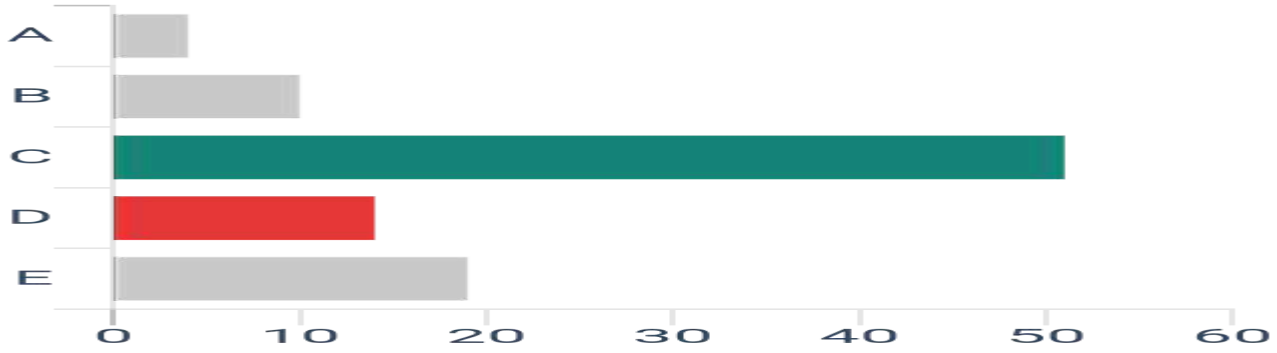

Session Progress

Responses Correct:	26
Responses Incorrect:	150
Responses Total:	176
Responses - % Correct:	15%

Hypersensitivity Reactions

A 30-year-old man presents to the Dermatology Clinic for review. He was diagnosed with an inherited condition when he was nine years old.

Which of the following complications should one look for?

Your answer was incorrect

A	Optic glioma
B	Retinal hamartomas
C	Facial angiofibromas
D	Connective tissue naevi
E	Cardiac rhabdomyoma

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

A	Optic glioma

The pictures show multiple neurofibromas and a very large café-au-lait patch consistent with neurofibromatosis type 1. Diagnostic criteria for NF1 are well established and include:

- At least six café-au-lait spots or hyperpigmented macules. They must be at least 5 mm wide in children younger than 10 years and 15 mm in adults.
- Axillary or inguinal freckles.
- Two or more typical neurofibromas or one plexiform neurofibroma.
- Optic nerve glioma.
- Two or more iris hamartomas. They are called Lisch nodules and are seen by slit-lamp examination.
- Sphenoid dysplasia or typical long-bone abnormalities such as arthrosis.

C	Facial angiofibromas

Facial angiofibromas are also associated with tuberous sclerosis, may be cosmetically disfiguring and are often amenable to laser therapy.

B	Retinal hamartomas

Retinal hamartomas are associated with tuberous sclerosis, not with NF1.

D	Connective tissue naevi

Connective tissue naevi are associated with tuberous sclerosis and other diseases such as Cowden disease and proteus syndrome.

E	Cardiac rhabdomyoma

Cardiac rhabdomyomas are the most common tumours of the heart in children, and are associated with tuberous sclerosis.

A 62-year-old man presents to his General Practitioner (GP) having noticed white patches on his tongue when cleaning his teeth. These do not dislodge when he tries to brush them away. The patient does not report any associated symptoms.

The patient is otherwise fit and well and is only on one tablet for control of his blood pressure (BP). He has been a pipe smoker for 40 years and admits to liking his alcohol, consuming about 15 glasses of spirits per week.

There are several lesions with one captured in the image below. There appears to be ulceration on the base of one of these areas. The teeth appear healthy. General clinical examination is normal.

What is the most likely diagnosis?

Your answer was incorrect

A	Lichen planus
B	Oral candidiasis
C	Oral leukoplakia

D	White sponge naevi of Cannon
E	Multiple aphthous ulcers

Explanation

C	Oral leukoplakia

The image here shows an opaque well demarcated elevated plaque with an irregular outline on the buccal mucosa. This lesion is classical for oral leukoplakia. The lesions are asymptomatic and cannot be rubbed off. The exact underlying cause of leukoplakia is largely unknown, but it is likely multifactorial and includes smoking, alcohol consumption, and ill-fitting dentures.

Image source: https://commons.wikimedia.org/wiki/File:Leukoplakia02-04-06.jpg (https://commons.wikimedia.org/wiki/File:Leukoplakia02-04-06.jpg)

D	White sponge naevi of Cannon

White sponge naevus (naevus of Canon) is an autosomal dominant condition that causes thick, white and velvety lesions on mouth mucosae. Lesions are usually present from birth or develop during childhood. The condition is entirely benign, and requires no treatment.

A	Lichen planus

Oral lichen planus is a chronic inflammatory condition of unknown aetiology that typically appears as patches of fine, white, lace-like lines. Mainstay of treatment is with topical corticosteroids in the form of sprays, lozenges or mouthwashes.

B	Oral candidiasis

Oral candidiasis (thrush) is a yeast infection of the mouth mucosae by the species *Candida albicans*. Common predisposing factors include smoking, immunodeficiency, dentures, and sicca. Treatment is by topical anti-fungal agents such as nystatin.

E	Multiple aphthous ulcers

Aphthous ulcers are painful and hence the patients are symptomatic.

Rate this question:

An 18-year-old man attends his General Practitioner (GP) Surgery, complaining of an itchy rash over his back and abdomen that has been present for about four days. He recalls that about two weeks previously, he had noticed an oval pink area, about 2 cm across, on the right upper part of his abdomen, surrounded by a dark red border. He had thought it was an area of dryness since it was quite itchy. The rash appeared 10 days after this area of 'dryness' in crops over his trunk. The patient is normally fit and well but does complain of having a few 'flu-like' symptoms recently. He is on no medications.

The rash, shown below, is mainly localised to the trunk and adjacent areas of the neck and limbs.

What is the most likely diagnosis?

Your answer was incorrect

A	Pityriasis rosea

B	Pityriasis alba
C	Pityriasis versicolor
D	Erythema multiforme
E	Psoriasis vulgaris

Explanation

A	Pityriasis rosea

The rash shown here consists of multiple small oval patches with a salmon pink colour which is in keeping with Pityriasis rosea. This is an acute exanthem that initially presents with a primary plaque (herald patch), followed, 1–2 weeks later, by a generalised rash, which can last up to 6 weeks. Typically it follows skin tension lines and each lesion is surrounded by a collarette of fine scale. It is associated with reactivation of herpesviruses 6 and 7. Prodromal flu-like symptoms may precede the herald patch. The herald patch measures 1–2 cm in diameter and is usually located on the trunk. The secondary rash is symmetric and again localised to the trunk and the adjacent areas of the neck and limbs. The rash distribution follows the relaxed skin tension lines and is typically described as a 'Christmas tree' pattern.

Image source: https://commons.wikimedia.org/wiki/File:Pityriasis_rosea-3.jpg (https://commons.wikimedia.org/wiki/File:Pityriasis_rosea-3.jpg) - Public domain

C	Pityriasis versicolor

Pityriasis versicolor is a superficial cutaneous fungal infection characterised by hypo- or hyperpigmented macules on the chest and the back. It is caused by *Malassezia furfur*. Mild pruritus is commonly present in the affected areas.

B	Pityriasis alba

Pityriasis alba is a hypopigmented dermatitis that primarily occurs in school-aged children. The exact cause is unknown. However, it is believed that the condition may be associated with eczema.

D	Erythema multiforme

The typical target lesions of erythema multiforme have a sharp margin, a round shape and three concentric zones of colours (and possibly a blister in the middle). Erythema multiforme may involve the mouth, with multiple irregular erosions on the oral mucosae. Extensive involvement of the mouth, lips, conjunctivae and

genitalia is called Stevens–Johnson syndrome. Infections are probably associated with at least 90% of cases of erythema multiforme, with the most common infections being herpes simplex virus and *Mycoplasma pneumoniae*. Management is supportive.

E	Psoriasis vulgaris

Despite the mention of scaling (which is also seen in psoriasis), the description presented above is very typical of pityriasis rosea.

7615

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Difficulty: Easy

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Responses Total:	179
Responses - % Correct:	15%

A 60-year-old woman with a background of psoriasis on the Medical Assessment Unit develops sudden-onset, widespread erythematous rash covering 80% of her body. She reports the rash to have an acute onset and feels warm to touch. She denies any recent flares of her psoriasis. The rash developed after she commenced a course of IV vancomycin for a methicillin-resistant *Staphylococcus aureus* (MRSA)-positive venous ulcer.

The rash is shown below:

Emollients are initiated and the vancomycin is discontinued.

Which of the following is the most appropriate additional intervention?

Your answer was incorrect

A	Chlorphenamine
B	Ciclosporin
C	Infliximab
D	Prednisolone
E	Vorinostat

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

A	Chlorphenamine

This patient has generalised exfoliative dermatitis, or ‘red man syndrome’, which is well known to be associated with vancomycin prescription. Stopping the infusion and use of antihistamines, such as chlorphenamine, combined with emollient dressings, are the initial intervention of choice, coupled with careful attention to the maintenance of fluid balance.

C	Infliximab

Infliximab is primarily an intervention for the treatment of severe psoriasis rather than exfoliative dermatitis, which makes it an inappropriate option for this patient.

B	Ciclosporin

Ciclosporin can be used to treat both severe eczema and psoriasis not responsive to other interventions. Although this patient has a history of psoriasis, the absence of any prior dermatology issues, coupled with the onset of an erythematous rash after commencing vancomycin, makes an alternative diagnosis more likely.

D	Prednisolone

Given the extent of tissue inflammation in erythroderma, topical steroids are actually very effective and should be considered for this patient to manage the rash. In very severe cases, systemic steroids can also be given. However, the most initial therapy, aiming to reduce histamine levels and prevent the symptoms from worsening, is to start antihistamines (eg chlorphenamine).

E	Vorinostat

Vorinostat is an intervention for cutaneous T-cell lymphoma, which is also associated with erythroderma.

73436

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A 52 year old man presents to the Dermatology Clinic for review. He has trialed methotrexate and acitretin for his psoriasis and failed to gain adequate benefit from phototherapy. You plan a trial of ustekinumab.

Which of the following best describes the mode of action of Ustekinumab?

Your answer was correct

A	Anti IL12 and anti IL23 monoclonal antibody
B	Anti-TNF monoclonal antibody
C	Anti-CD20 monoclonal antibody
D	Anti-VEGF monoclonal antibody
E	Anti-IgE monoclonal antibody

Explanation

A	Anti IL12 and anti IL23 monoclonal antibody

Ustekinumab is a fully human IgG1κ monoclonal antibody that binds with specificity to the shared p40 protein subunit of human cytokines interleukin (IL)-12 and IL-23. It inhibits the bioactivity of human IL-12 and IL-23 by preventing p40 from binding to the IL-12Rβ1 receptor protein expressed on the surface of immune cells.

B	Anti-TNF monoclonal antibody

A range of monoclonal antibodies inhibit the TNF-alpha pathway; examples include infliximab and adalimumab. These are also used in the management of psoriasis.

C	Anti-CD20 monoclonal antibody

Rituximab is an example of an anti-CD20 monoclonal antibody used in the treatment of a range of inflammatory diseases and haematological malignancies.

D	Anti-VEGF monoclonal antibody

Bevacizumab is an example of an anti-VEGF monoclonal antibody, used in the treatment of colon cancer.

E	Anti-IgE monoclonal antibody

Omalizumab binds to IgE and prevents binding of IgE to FcεRI (high-affinity IgE receptor) on basophils and mast cells, thereby reducing the amount of free IgE that is available to trigger the allergic cascade. Omalizumab is used in asthma and severe eczema which is resistant to other interventions.

39094

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Difficulty: Easy

A 27-year-old woman presents to the Dermatology Clinic with a thickened erythema over the right shoulder. She has noticed the skin becoming darker. New areas have also appeared on her back and right thigh, as shown below. The skin has become thicker in these areas too. Six weeks earlier, she was admitted to hospital following an accident on her boyfriend's motorcycle.

She is otherwise fit and well. She takes antacids occasionally, which she buys over the counter. She is a non-smoker and drinks approximately 20 units of alcohol a week.

On examination, her temperature is 36.8 °C. Her blood pressure (BP) is 120/85 mmHg, while her pulse is 70 beats per minute (bpm). Respiratory, cardiovascular, abdominal, and neurological examinations are unremarkable.

What is the most likely diagnosis?

Your answer was incorrect

A	Diffuse systemic sclerosis
B	Morphoea
C	Limited systemic sclerosis
D	Eosinophilic fasciitis
E	Shoulder-hand syndrome

Explanation

B	Morphoea

Morphoea, or localised scleroderma, usually presents as a plaque of indurated mauve skin which later becomes waxy and either pale or hyperpigmented, with absent hair and sweating. Young adults aged 20-40 years are affected commonly. The cause is unknown but may be provoked by trauma or infection. Extensive morphoea may mimic systemic sclerosis, but differs in the absence of systemic disease, Raynaud's phenomenon and hand lesions. Autoantibodies are usually negative. Plaque morphoea may improve spontaneously, but local steroids, topical and oral vitamin D analogues and light therapy can be used.

Image source: https://commons.wikimedia.org/wiki/File:MercMorphea.JPG (https://commons.wikimedia.org/wiki/File:MercMorphea.JPG)

E	Shoulder-hand syndrome

This is also known as reflex sympathetic dystrophy, where chronic pain is seen after a regional event such as a fracture.

A	Diffuse systemic sclerosis

The absence of significant gastro-oesophageal reflux disease, hand signs, hypertension, renal impairment and any significant shortness of breath indicating pulmonary fibrosis, counts against diffuse systemic sclerosis.

C	Limited systemic sclerosis

Limited systemic sclerosis was formerly known as CREST syndrome (Calcinosis, Raynaud's disease, (o)Esophageal dysmotility, Sclerodactyly, Telangiectasia). This patient has symptoms of skin involvement only.

A 28-year-old man presents to his General Practitioner (GP) with hyperpigmented patches in his mouth, shown below. He has been feeling increasingly unwell with lethargy, nausea and vomiting over the past few days.

What other findings would you be most likely to expect?

Your answer was incorrect

A	Hypotension
B	Hypokalaemia
C	Hypernatraemia
D	Hyperglycaemia
E	Metabolic alkalosis

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

A	Hypotension

This patient has buccal pigmentation which raises the possibility of adrenal insufficiency, supported by the history of nausea and lethargy over the past few days. It's likely that he will be suffering from postural hypotension, driving the correct answer here.

D	Hyperglycaemia

Diabetes mellitus may co-exist with adrenal insufficiency, although reduced production of counter-regulatory hormones makes hypo rather than hyperglycaemia more likely.

B	Hypokalaemia

Adrenal insufficiency is associated with hyperkalaemia, not hypokalaemia, and hyporeninaemic hyperaldosteronism, a cause of hypokalaemia isn't associated with buccal pigmentation.

C	Hypernatraemia

Hyponatraemia is seen in adrenal insufficiency, hypernatraemia is seen in other conditions such as diabetes insipidus where free water is lost.

E	Metabolic alkalosis

Metabolic acidosis is seen in association with adrenal insufficiency.

39079

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Difficulty: Average

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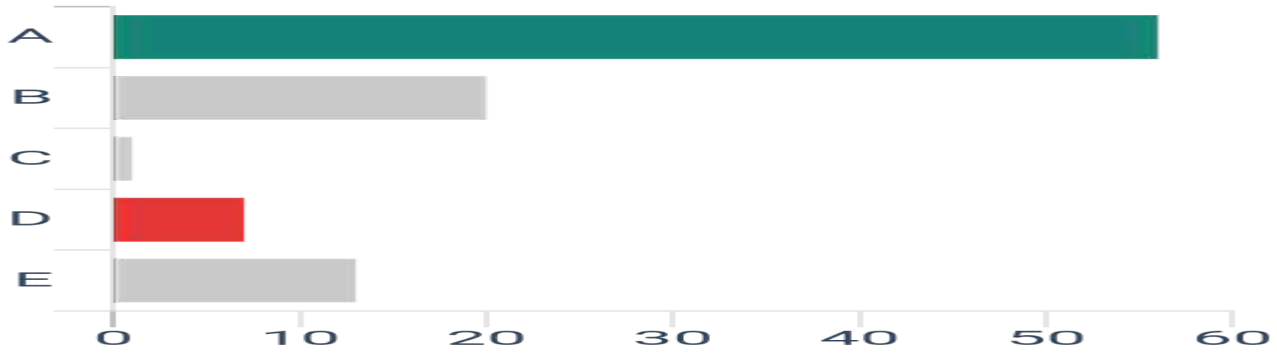

Session Progress

Responses Correct: 27

Responses Incorrect: 156

A 45-year-old man is reviewed in the Dermatology Clinic with a one month history of worsening flaking skin and areas of erythema on his feet which have only partially responded to topical antifungals. He has suffered from increasing tiredness over the past four months and wakes twice per night to pass urine.

On examination, his blood pressure (BP) is 145/82 mmHg. His body mass index (BMI) is 32 kg/m^2. He is continuing to use topical antifungal preparations.

Which of the following is the most appropriate next step

Your answer was incorrect

A	Fasting blood glucose testing
B	Oral flucloxacillin
C	Oral fluconazole
D	Topical hydrocortisone

E	Topical mupirocin

Explanation

A	Fasting blood glucose testing

The highlighted features here, including partial response to antifungals of tinea pedis, increasing tiredness and nocturia in a middle-aged obese man, are consistent with an underlying type II diabetes. A fasting blood glucose level of over 7 mmol/l is appropriate to confirm the diagnosis in the presence of symptoms; HbA1c can be used as an alternative.

C	Oral fluconazole

In the presence of ongoing untreated type II diabetes, systemic antifungals are unlikely to achieve clearance of tinea infection. They may be of value in some patients, although penetration of flaking, cracked skin on the feet is likely to be limited.

B	Oral flucloxacillin

Although concomitant staphylococcal infection is common in patients with tinea pedis, it is not likely to be the primary driver for recurrent and resistant infection here.

D	Topical hydrocortisone

Topical hydrocortisone is not effective in patients with fungal skin infection.

E	Topical mupirocin

Topical antibiotics may be useful in patients with superficial bacterial infection, in addition to evidence of tinea, but in this case, it is more important to rule out underlying diabetes mellitus. Mupirocin is more commonly used in the treatment of impetigo or to achieve clearance of meticillin-resistant *Staphylococcus aureus* (MRSA) where there is long-term skin carriage.

71608

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A 53-year-old man with a history of type II diabetes, cardiovascular disease, and rosacea comes to the Dermatology Clinic because of a blistering skin rash on sun-exposed areas. He is not sure which of his medications may be responsible.

On examination, he has an erythematous blistering rash on his face, upper chest and both arms.

Which of the following medications is the most likely cause?

Your answer was incorrect

A	Amlodipine
B	Metformin
C	Oxytetracycline
D	Ramipril
E	Vildagliptin

Explanation

C	Oxytetracycline

A number of drugs are commonly implicated in photosensitive skin reactions, including:

- Antibiotics: tetracyclines, fluoroquinolones, sulphonamides
- NSAIDs
- Diuretics: e.g. furosemide, bumetanide
- Sulphonylureas
- Neuroleptics: e.g. chlorpromazine
- Antifungals: e.g. terbinafine, itraconazole
- Other drugs: e.g. amiodarone, diltiazem.

Where the causative agent cannot be discontinued, for example amiodarone, then the patient should be advised to stay out of the sun and wear an effective sun block. Topical corticosteroids are the treatment of choice for drug-induced skin reactions; systemic corticosteroids can be used in severe cases. Varying subtypes

of skin reactions are seen; these include photo-allergic reactions, lichenoid reactions, lupus-like reactions and pseudo-porphyria.

E	Vildagliptin

Vildagliptin has been reported in post-marketing surveillance to be associated with urticaria and bullous skin reactions, rather than photosensitivity.

A	Amlodipine

Amlodipine can result in alopecia and a purpuric rash, but isn't normally associated with a photosensitive rash.

B	Metformin

Erythema and urticarial rashes are very rarely reported in association with metformin therapy, and photosensitisation isn't a feature.

D	Ramipril

Ramipril is associated with photosensitivity, but it is listed as very rare on the datasheet (much less commonly than oxytetracycline).

36471

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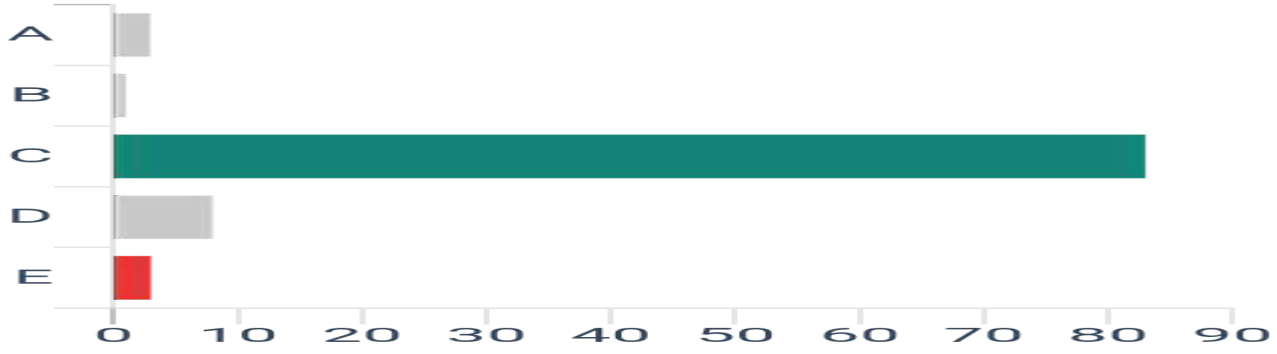
Difficulty: Easy

Peer Responses %



A 19-year-old woman presents to her General Practitioner (GP) with a rash over her left buttock, which has been present for about two months. She finds it terribly itchy, and it has been increasing in size recently.

She has just returned from a gap year travelling around the USA. She has a history of atopic eczema as a child. She feels well in herself otherwise.

She is a non-smoker and drinks alcohol socially. She takes no regular medications and has no allergies.

What is the best treatment option in the first instance?

Your answer was incorrect

A	Moderately potent topical steroids
B	Dithranol ointment
C	Terbinafine cream
D	Oral doxycycline
E	Oral itraconazole

Explanation

C	Terbinafine cream

This lady has tinea corporis. This is due to dermatophyte fungi of the *Microsporum*, *Trichophyton* or *Epidermophyton* species. It typically presents with a unilateral annular plaque. The border is scaly with occasional small pustules. Pruritus can range from minimal to severe. Skin scrapings should be taken to allow mycological confirmation of the diagnosis before starting treatment. Fungicidal drugs such as terbinafine or imidazoles (e.g. ketoconazole, itraconazole) are effective. For localised disease as seen here, topical treatment is preferred due to a lower risk of adverse effects. Oral treatment is usually reserved for widespread, complicated or resistant cases.

D	Oral doxycycline

This antibiotic can be used for acne, rosacea and bacterial skin infections. However, the features in the photograph suggest none of these diagnoses.

A	Moderately potent topical steroids

Fungal infection may worsen on application of topical corticosteroids due to their locally immunosuppressive effects. The classical appearance may also be lost, leading to so-called ‘tinea incognito’. This can make the diagnosis more difficult and further delay appropriate treatment.

B	Dithranol ointment

This is an antimitotic agent used in the treatment of psoriasis. This condition is usually symmetrical and rarely presents with a solitary plaque. Its scaling is much coarser and an annular configuration is not usually observed.

E	Oral itraconazole

This or oral terbinafine would be appropriate for more widespread disease, cases unresponsive to topical treatment or perhaps in the context of immunosuppression. For first-line treatment in this scenario, topical therapy is a better option.

An 81-year-old woman is admitted to the Emergency Department (ED) with fever and blistering. The blisters are most prevalent over her legs but are widespread and tense. She is pyrexial - her temperature is 38.1 °C. She has a background of psoriasis and a recent diagnosis of Alzheimer's disease.

The blistering is shown below:

A course of topical steroids is applied for three days, in addition to intravenous (IV) antibiotics. After this time, her fevers have subsided. However, the blistering remains unchanged.

What is the most appropriate next step in management?

Your answer was incorrect

A	Dapsone orally

B	Doxycycline orally
C	Methotrexate orally
D	Prednisolone orally
E	Rituximab IV

Explanation

D	Prednisolone orally

This is bullous pemphigoid, as demonstrated by the tense, fluid-filled blisters and patient profile. Pemphigoid usually affects those aged over 80 years and has an association both with psoriasis and with some neurological disorders such as dementia, cerebrovascular disease and Parkinson's disease. The mainstay of management for bullous pemphigoid is oral steroids.

B	Doxycycline orally

Doxycycline may be an alternative treatment for bullous pemphigoid. However, it is usually used after failure of systemic steroids. It is important that patients are covered for infection in pemphigoid, as this is associated with high mortality.

A	Dapsone orally

Dapsone may be an effective treatment in bullous pemphigoid (or dermatitis herpetiformis, another blistering disorder). However, oral prednisolone is the most appropriate next stage in management, given the failure of topical steroids. Most patients with bullous pemphigoid are treated with systemic steroids.

C	Methotrexate orally

Methotrexate is an effective treatment for both bullous pemphigoid and psoriasis. However, oral steroids are the mainstay of treatment in most patients.

E	Rituximab IV

Rituximab may be used for particularly resistant pemphigoid which has not been effectively managed by topical or oral steroids, in addition to disease-modifying agents such as methotrexate. This patient would be expected to be commenced on oral steroids.

This 68-year-old woman is reviewed in the Dermatology Clinic. She has a number of underlying medical conditions and takes a range of medications including ramipril, thyroxine, metformin, azathioprine and naproxen.

The photograph below shows a skin lesion:

Which of the following is the most likely cause of her skin condition?

Your answer was correct

A	Type II diabetes mellitus
B	Hypothyroidism
C	Naproxen use
D	Ulcerative colitis

Dr. Jamil Alrajhi
Apr 6, 2025

E	Microscopic colitis

Explanation

D	Ulcerative colitis

This patient is suffering from pyoderma gangrenosum, with an extensive area of skin loss that has a tender, red/blue necrotic edge, and there is some central healing and scarring. Pyoderma gangrenosum is most strongly associated with inflammatory bowel disease, but is also seen in rheumatoid arthritis, systemic vasculitis, myeloma and type I diabetes.

A	Type II diabetes mellitus

Although this patient is taking metformin, type II diabetes isn't a cause of pyoderma gangrenosum. It does increase the risk of bacterial skin infection, which is most commonly seen to affect the soles of the feet.

B	Hypothyroidism

Hypothyroidism is associated with rough dry skin and scaling, rather than with pyoderma gangrenosum.

C	Naproxen use

Naproxen, like other NSAIDs, is associated with the development of microcytic colitis and it is associated with allergic skin rashes rather than with pyoderma.

E	Microscopic colitis

Although inflammatory bowel disease including ulcerative colitis and Crohn's is associated with pyoderma gangrenosum, microcytic colitis is not strongly associated with the condition.

A 30-year-old man presents to the Dermatology Clinic with the following rash, shown below. It started as a lesion on the knuckles a year ago. Over the last six months, it has spread to his arm, trunk and back. He has also noticed some weight loss and malaise.

He works as an entertainment officer on a cruise ship, is single, and has recently spent the past year cruising around the Far East. He was given a prescription of antibiotics while abroad, for dysuria.

On examination, his blood pressure (BP) is 122/72 mmHg. His pulse is 65 beats per minute (bpm) and regular. His body mass index (BMI) is 23 kg/m^2. Cardiovascular, respiratory, and abdominal examination is unremarkable. There is no tremor.

Which of the following is the disease most likely to be the underlying his skin appearance?

Your answer was incorrect

A	Hodgkin's lymphoma
B	Hyperthyroidism
C	HIV infection
D	Non-Hodgkin's lymphoma
E	Systemic lupus erythematosus

Explanation

C	HIV infection

The skin rash shown here is disseminated granuloma annulare. The cause is unknown, although there are numerous reports of the association of granuloma annulare with HIV infection and lymphoma; given what we know of this man's age and lifestyle, HIV is the likelier of the two diagnoses. Clinically, lesions lie over the knuckles and are composed of dermal nodules fused into a rough ring shape. On the trunk, many lesions may have a purple tinge to them. Lesions usually resolve over 2–3 years. Stubborn lesions respond to intra-lesional trimacinolone or systemic immunosuppressants. Some resolution occurs when the diagnosis of HIV is made and HAART is instituted.

E	Systemic lupus erythematosus

SLE is commonly associated with an erythematous rash on sun-exposed areas rather than the generalised granulomatous rash seen here.

A	Hodgkin's lymphoma

Although Hodgkin's lymphoma is a recognised cause of granuloma annulare, the history fits better with a potential infectious agent as the cause of his presentation, rather than haematological malignancy.

B	Hyperthyroidism

BMI, pulse and blood pressure are in the normal range, and there is no tremor, making significant thyrotoxicosis less likely as the underlying diagnosis here.

D	Non-Hodgkin's lymphoma

Generalised granuloma annulare is associated with non-Hodgkin's lymphoma, although NHL presents at an older median age and is associated with other symptoms not present here such as lymphadenopathy, weight loss and night sweats.

A 45-year-old woman presents to the Emergency Department (ED) with sudden onset tender nodules on her legs (see photo) as well as fever and joint pains.

Auscultation of the chest appears unremarkable.

Which histocompatibility antigen is present in approximately 65% of patients with the skin rash seen here?

Your answer was incorrect

A	HLA DR2
B	HLA DR3

C	HLA DR4
D	HLA DQ2
E	HLA B27

Explanation

E	HLA B27

The clinical picture and findings are typical of erythema nodosum. There is an association with the HLA B27 histocompatibility antigen, which is present in 65% of patients with erythema nodosum.

D	HLA DQ2

HLA DQ2 serotype has been linked to the development of coeliac disease.

A	HLA DR2

HLA DR2 serotypes are associated with a number of conditions such as: autoimmune hepatitis, primary biliary cholangitis, systemic lupus erythematosus, and Goodpasture syndrome.

B	HLA DR3

HLA-DR3 is associated with the development of multiple conditions such as: myasthenia gravis, Hashimoto's thyroiditis, primary sclerosing cholangitis, and membranous glomerulonephritis.

C	HLA DR4

HLA-DR4 is associated with a number of conditions, including: rheumatoid arthritis, systemic lupus erythematosus, pemphigoid gestationis, pemphigus foliaceus, IgA nephropathy, and polymyalgia rheumatica.

A 45-year-old woman presented to the Emergency Department (ED) with sudden onset tender nodules on her legs (see photo), fever, joint pains, and shortness of breath.

A chest X-ray (CXR) in the ED reveals bilateral hilar lymphadenopathy.

Which of the following syndromes is she most likely presenting with?

Your answer was incorrect

A	Lofgren's syndrome
B	Felty's syndrome
C	Caplan's syndrome

D	Loffler’s syndrome
E	Sjogren’s syndrome

Explanation

A	Lofgren’s syndrome

Lofgren’s syndrome is a form of acute sarcoidosis that presents with erythema nodosum, bilateral hilar lymphadenopathy and is additionally often accompanied by joint symptoms.

E	Sjogren’s syndrome

Sjogren’s syndrome is an autoimmune condition resulting in the destruction of secretory glands in the eyes and mouth resulting in ulceration, and sicca.

B	Felty’s syndrome

Felty’s syndrome consists of the following triad: rheumatoid arthritis, splenomegaly and neutropenia.

C	Caplan’s syndrome

Caplan’s syndrome is classified as the combination of rheumatoid arthritis and pneumoconiosis.

D	Loffler’s syndrome

Loffler’s syndrome occurs due to the accumulation of eosinophils in the lung as a result of parasitic infections, ascaris lumbricoides is the commonest cause.

A 18-year-old man presents to the Dermatology Clinic with a six month history of an itchy scalp. It began as a few discrete, scaly lesions on his scalp. He was then prescribed griseofulvin by his General Practitioner (GP), which he took for a two weeks. Since then, he has continued to have itching and scaling over the scalp.

His mother is very anxious as she thinks his hair is thinning in places. More recently, his 8-year-old sister has been scratching her scalp, too.

On examination, there is extensive scaling with excoriations in some areas, one of which is shown below. There is associated mild, patchy alopecia, but no visible inflammation. There are no rashes elsewhere, nor are there any nail changes.

What is the most likely diagnosis?

Your answer was correct

A	Eczema

B	Head lice
C	Psoriasis
D	Scabies
E	Tinea capitis

Explanation

E	Tinea capitis

The presentation is typical of tinea capitis or scalp ringworm. This dermatophyte infection mostly occurs in younger children. Pruritus is variable. The level of inflammation depends to some extent on the causative organism. Scaling and alopecia are typical features. The infection is contagious so it is not surprising that a sibling has been affected. Topical treatment is ineffective for tinea capitis, though ketoconazole shampoo is used to reduce the chances of transmission. Most specialists recommend a griseofulvin dosage of 20-25 mg/kg/d for 4-6 weeks. Griseofulvin accumulates in keratin of the horny layer, hair, and nails, rendering them resistant to invasion by the fungus. Treatment must continue long enough for infected keratin to be replaced by resistant keratin, usually 4-6 weeks. Several newer antimycotic agents, including itraconazole, terbinafine, and fluconazole, have been reported as effective and safe.

Although not licensed in young children, a four-week course of the fungicidal drug terbinafine is often preferred. A meta-analysis of 7 studies concluded that terbinafine was more effective for tinea capitis primarily caused by *Trichophyton* species, whereas griseofulvin was more effective for tinea capitis primarily caused by *Microsporum* species.

Image source: https://commons.wikimedia.org/wiki/File:Teigne_tondante_enfant.jpg (https://commons.wikimedia.org/wiki/File:Teigne_tondante_enfant.jpg)

A	Eczema

It would be unusual for this to affect only the scalp and it does not give rise to alopecia.

B	Head lice

Whilst this is a common infestation in children and associated with much pruritus, it does not give rise to focal alopecia.

C	Psoriasis

This presents with marked erythema or very pronounced scaling; alopecia is very unusual.

A 30-year-old overweight mechanic, who is otherwise well with no other symptoms, presents to his General Practitioner (GP) with an intensely itchy rash over both elbows. He denies any significant past medical history but admits to drinking two pints of lager on a daily basis.

What is the best initial management for relief of his symptoms?

Your answer was incorrect

A	Beclomethasone cream
B	Dapsone
C	Dithranol
D	Patch testing for occupational allergy
E	Narrow-band UVB phototherapy

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Dapsone

The picture shows dermatitis herpetiformis (DH), an immune-mediated blistering skin disease with an associated, commonly asymptomatic, gluten-sensitive enteropathy (GSE). The rash is characteristically very itchy with blistering lesions over the extensor surfaces. Although all patients with DH by definition have gluten-sensitive enteropathy, fewer than 10% of patients have gastrointestinal symptoms.

Histologically there is granular deposition of immunoglobulin A (IgA) at the dermal–epidermal junction of the skin. IgA-circulating immune complexes are present in 25–35% of patients with DH, although no association with disease severity has been noted. These immune complexes also have been noted in patients with isolated GSE, and are likely linked to the presence of enteric disease.

First-line treatment is with dapsone, which brings rapid improvement in most A gluten-free diet may also improve or control the symptoms in some patients with DH, especially as a long-term measure (eventually allowing discontinuation of dapsone). However, it requires motivation, as the diet may be unpalatable and difficult to adhere to.

E	Narrow-band UVB phototherapy

Narrow-band UVB phototherapy is used in the management of many cutaneous disorders such as eczema and psoriasis, but not in the treatment of DH.

A	Beclomethasone cream

Topical corticosteroids are not used in the treatment of DH.

C	Dithranol

Dithranol is a topical agent, commonly used in the treatment of plaque psoriasis, and is not used in the management of DH.

D	Patch testing for occupational allergy

Patch testing is used to test for contact allergic dermatitis, and and does not form part of the management of DH.

Dr. Jamil Alrajhi

Apr 6, 2025

A 60-year-old woman presents to the Dermatology Clinic with an itchy rash on her trunk and elbows. She has a 20-year history of coeliac disease and claims to be on a gluten-free diet. She had a thyroidectomy 10 years ago. She drinks two cans of beer per day.

On examination, she has xanthelasma and the rash is shown below. There are no stigmata of chronic liver disease. The rest of the physical examination is normal.

Investigations reveal the following:

Investigation	Result	Normal Value
Haemoglobin (Hb)	107 g/l	115–155 g/l
White cell count (WCC)	3.7 × 10^9/l	4.0–11.0 × 10^9/l
Platelets (PLT)	148 × 10^9/l	150–400 × 10^9/l
Mean corpuscular volume (MCV)	76 fl	80–100 fl

Bilirubin	29 µmol/l	2–17 µmol/l
Alanine aminotransferase (ALT)	308 U/l	7–50 U/l
Alkaline phosphatase (ALP)	1063 U/l	30–150 U/l
Gamma-glutamyltransferase (γGT)	520 U/l	5–30 U/l
Albumin	3.6 g/dl	3.5–5.5 g/dl
Erythrocyte sedimentation rate (ESR)	81 mm/hour	1–20 mm/hour
Lactate dehydrogenase (LDH)	459 U/l	100–190 U/l
Anti-smooth muscle antibody (ASMA)	Negative	
Anti-mitochondrial antibody (AMA)	Positive (1 in 80)	
Ultrasound (US) scan of liver	Normal	

What is the most appropriate treatment?

Your answer was correct

A	Penicillamine
B	Ursodeoxycholic acid
C	Phenobarbitone
D	Corticosteroids
E	Azathioprine

Explanation

B	Ursodeoxycholic acid

This woman has evidence of dermatitis herpetiformis, likely to be a result of lack of compliance with her diet. She also has other autoimmune disease such as thyroid disorder. She has now developed PBC associated with her coeliac disease. In PBC, liver function tests are cholestatic, and the presence of anti-mitochondrial antibody at a titre of >1:40 is highly suggestive of PBC. Ursodeoxycholic acid is widely used, and meta-analysis has shown that it improves liver biochemistry and delays disease progression, although only if used very early in the course of the disease. Other drugs such as methotrexate, azathioprine, corticosteroids, cyclosporine and penicillamine have been tried, but clinical benefit is unproven and side effects may be significant.

Image source: https://commons.wikimedia.org/wiki/File:Dermatitis_Herpetiforme_4.jpg (https://commons.wikimedia.org/wiki/File:Dermatitis_Herpetiforme_4.jpg) - This file is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

A	Penicillamine

Penicillamine would be the correct treatment for Wilson's disease. Wilson's is an inherited disorder of failure of biliary copper excretion leading to copper accumulation, causing deposition in the liver and CNS. This would have been suggested by evidence of liver disease, tremor or dysarthria, amongst other symptoms. The liver function tests suggest a cholestatic rather than a hepatic picture, making this a less likely diagnosis.

C	Phenobarbitone

Phenobarbitone is an anti-epileptic drug which can be used in nearly all forms of epilepsy. It can also be used to lower levels of unconjugated hyperbilirubinaemia, such as in Gilbert syndrome.

D	Corticosteroids

Corticosteroids could be considered as treatment for inflammatory conditions. A possible relevant inflammatory condition is autoimmune hepatitis, which would have been suggested by anti-smooth muscle antibody rather than anti-mitochondrial antibodies.

E	Azathioprine

This is an immunosuppressive agent used generally for rheumatoid arthritis, inflammatory bowel disease and following organ transplantation. As there is no evidence of any of these conditions, there is no need for azathioprine.

7411

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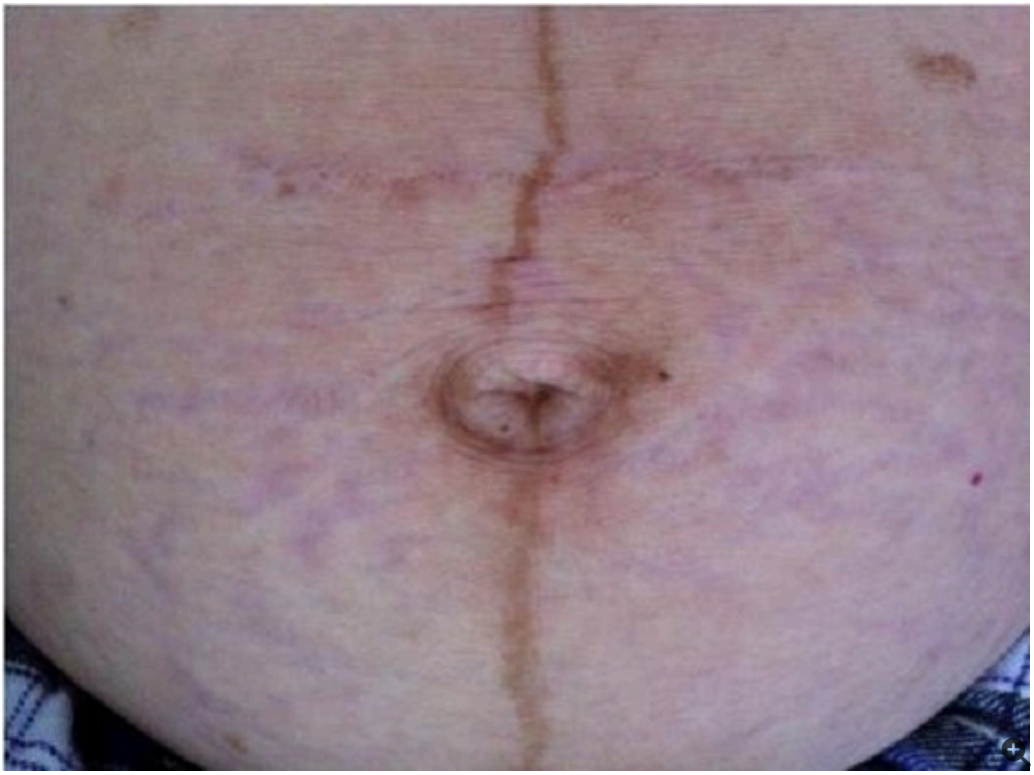
Difficulty: Easy

A 35-year-old woman, who has just had her first baby, attends the Dermatology Clinic with striae across her abdomen, which developed in the last trimester.



Which of the following hormones is mostly likely to cause this striae?

Your answer was incorrect

A	Cortisol
B	Human chorionic gonadotrophin
C	Progesterone
D	Thyroxin
E	Parathyroid hormone

Explanation

A	Cortisol

Striae are caused by rapid stretching of connective tissue. They are common in adolescence and pregnancy, where they are likely to develop in the 3rd trimester. They may also occur with topical or oral corticosteroid use or in Cushing's syndrome due to reduced skin pliability.

C	Progesterone

Progesterone is a crucial hormone that is implicated in multiple biological functions, such as the menstrual cycle and embryogenesis. Even though lack of progesterone is thought to cause acceleration of skin aging, the hormone itself has not been associated with the development of striae.

B	Human chorionic gonadotrophin

Human chorionic gonadotrophin (hCG) is produced by the placenta and is not associated with the development of striae. The detection of hCG in test strips is a commonly used over-the-counter diagnostic method of identifying pregnancy.

D	Thyroxin

Thyroxine is implicated in multiple aspects of human metabolism but is not thought to influence the development of striae.

E	Parathyroid hormone

Parathyroid hormone regulates serum calcium, phosphate and is implicated in the synthesis of vitamin D. It has not been associated however with the development of striae.

40098

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Previous Question

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Difficulty: Average

This 50-year-old man is reviewed in the Respiratory Clinic after being referred by his General Practitioner (GP) with a persistent productive cough. This has developed over the past two years after multiple episodes of recurrent pneumonia. He has also been experiencing dyspnoea, especially on exertion, and has also exhibited rhino-sinusitis symptoms.

In the clinic, the Clinician noted the following sign on examination:

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Asthma
B	Pulmonary fibrosis
C	Bronchiectasis
D	Cystic fibrosis
E	Lymphoma

Explanation

C	Bronchiectasis

The picture above shows yellow nail syndrome, which is characterised by the triad of pulmonary disease, lymphoedema and slow-growing nails with no cuticle or lunula. Swelling of the peri-ungal tissue and onycholysis can occur. Bronchiectasis, pleural effusions, chronic sinusitis and recurrent pneumonias are commonly associated with yellow nail syndrome. This gentleman has likely developed bronchiectasis due to recurrent pneumonias. There may also be hereditary causes, and it has been associated with an autosomal dominant inheritance pattern. Other associations include: obstructive sleep apnoea, tuberculosis, malignancy, diabetes mellitus, connective tissue disease, nephrotic syndrome, penicillamine use and thyroid disease. Furthermore, sinusitis can be associated with bronchiectasis.

Thirty per cent of cases go into spontaneous remission. Treatments for yellow nail syndrome include high-dose vitamin E.

References:

Yellow nail syndrome: analysis of 41 consecutive patients. doi: 10.1378/chest.08-0137

Yellow nail syndrome and lung lymphoma. doi: 10.1111/j.1365-2230.2004.01541.x

E	Lymphoma

Although there have been a case report regarding lung lymphoma and yellow nail syndrome (see below), in this case bronchiectasis is more commonly associated with yellow nail syndrome, especially in a respiratory clinic setting.

A	Asthma

Asthma is not associated with yellow nail syndrome. Extra-pulmonary features of asthma include: allergic rhinitis, nasal polyps and atopic dermatitis.

B	Pulmonary fibrosis

Pulmonary fibrosis is more likely to be associated with acquired bilateral digital clubbing.

D	Cystic fibrosis

Cystic fibrosis is associated with bilateral digital clubbing.

Rate this question:

A 26-year-old woman presents to the Dermatology Clinic with an enlarging 6 cm indurated, hypopigmented plaque at the umbilicus which appeared shortly after she had her belly-button pierced last year. She is anxious, as it appears to be enlarging and now she cannot wear any jewellery at the site.

She has no other skin lesions elsewhere and no other medical problems. She takes no medications regularly and has no allergies. She smokes 20 cigarettes per day and drinks alcohol occasionally.

What is the most likely diagnosis?

Your answer was correct

A	Tinea corporis
B	Post-inflammatory hypopigmentation
C	Vitiligo
D	Lichen planus
E	Morphoea

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

E	Morphoea

- The cause of morphoea is uncertain.
- It typically presents with one or more indurated plaques and is more common in females.
- These are usually initially inflamed, especially around the border leading to an annular appearance.
- As the sclerotic process progresses, plaques go from thickened to atrophic.
- Eventually, the inflammation usually subsides and the plaque turns brown or ivory white.
- Some patients describe tightness of the skin, itching or discomfort, though the condition may be asymptomatic.
- The linear variant of morphoea is more common in children: on the forehead, this is known as morphoea en coup de sabre.
- Linear morphoea over a joint can result in restriction of movement if not treated effectively.

- Treatment options for morphoea in general include potent or very potent topical corticosteroids, oral corticosteroids, phototherapy and methotrexate.

A	Tinea corporis

Whilst this might present with an enlarging plaque on the abdomen, it is a superficial process without induration. Peripheral scaling and an annular appearance would be expected.

B	Post-inflammatory hypopigmentation

This follows an episode of inflammation, which is not mentioned in the history. It is macular.

C	Vitiligo

This condition can appear at sites of trauma, but is macular and causes depigmentation (complete loss of pigment) rather than hypopigmentation (partial reduction in pigmentation).

D	Lichen planus

There are many forms of this condition, the commonest (classical lichen planus) presenting with pruritic violaceous papules. There are annular and atrophic variants that might possibly appear similar to morphoea, but these do not cause significant induration.

6320

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Difficulty: Difficult

A 19-year-old woman presents to her General Practitioner (GP) concerned about the appearance of the skin around her left eye. She reports having had some pain around her left eye three days ago but since then, as she could not see any abnormalities, she did not do anything about it. However, over the last three days, some itchy spots have begun appearing in the same area.

On examination, the left eyelid shows erythematous skin with papular lesions and vesicles, which are weeping. The eyeball itself is white and does not appear to be involved. No proptosis is identified and eye movements are found to be equal in both eyes.

The patient is otherwise fit and well and not on any medications.

What is the most likely diagnosis?

Your answer was incorrect

A	Pre-septal cellulitis
B	Orbital cellulitus
C	Impetigo
D	Erysipelas
E	Herpes simplex infection

Explanation

E	Herpes simplex infection

Herpes simplex virus (HSV) infection can cause a variety of clinical symptoms. HSV type 1 is normally associated with orofacial infections. It typically presents as vesicular rash that may be preceded by a prodrome of pain, tingling, burning or itching. Vesicles become pustular or ulcerative with formation of crusts within 72–96 hours and heal over 8–10 days.

It is important to ask if the patient has had a recent cold sore infection of the mouth or has been in contact with anyone who has had a cold sore infection, since direct spread from the mouth to the eye can occur via contact with infected saliva.

It is imperative that the eye is also examined, both externally (the cornea looking for the classic dendritic ulcer on the surface) and internally (to exclude acute retinal necrosis, a rare complication of HSV infection that may result in blindness).

D	Erysipelas

Erysipelas is a superficial bacterial skin infection caused by *S. pyogenes* and characterized by well demarcated erythema. Lymphatic involvement is common and manifests by streaking of the overlying skin and local lymphadenopathy.

A	Pre-septal cellulitis

Pre-septal cellulitis (also known as periorbital cellulitis) is an infection of the eyelids or skin around the eyes. Symptoms include: erythema, oedema, discharge, loss of visual acuity, and pain. Pre-septal cellulitis must be differentiated from orbital cellulitis, which is an emergency and requires urgent medical intervention.

B	Orbital cellulitus

Orbital cellulitis is a dangerous infection that affects the fat and muscles around the eye. It usually occurs due to acute spread of infection into the eye socket from either the adjacent sinuses or through the blood. Symptoms include painful eye movement, opthalmoplegia, loss of vision, discharge, proptosis, oedema and erythema of the eyelids. Urgent ophthalmological assessment and treatment with antibiotics is paramount. In some patients surgical intervention may also be required in order to drain the presence of abscesses.

C	Impetigo

Impetigo is an acute and highly contagious superficial infection of the skin that commonly occurs in children, and consequently outbreaks in nurseries and schools are not rare. There are two forms of the condition, bullous and non-bullous, with the former being caused almost exclusively by Staphylococcus aureus whereas the latter can be caused by S. aureus, group A streptococcus (Streptococcus pyogenes), or a combination of both. Culture of the skin lesions is required to confirm the diagnosis and determine the causative organism. Treatment consists of topical therapy (topical mupirocin) alone or in combination with systemic therapy.

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Dr. Jamil Alrajhi

Apr 6, 2025

A 54-year-old woman presents to the Dermatology Clinic with a dry rash on her back. This has recently become more irritable and itchy. She has not suffered from similar rashes previously.

She has a past medical history of hysterectomy for menorrhagia, asthma and type II diabetes mellitus (TIIDM). She currently takes salbutamol as required, and metformin.

A photograph of the rash on her back is shown below:

What is the most appropriate management plan for this patient?

Your answer was incorrect

A	Coal tar
B	Topical steroid and topical vitamin D preparation
C	Topical salicylic acid

D	Methotrexate
E	Systemic corticosteroids

Explanation

B	Topical steroid and topical vitamin D preparation

This patient has typical plaque psoriasis. This is characterised by a silver, scaly plaque on a salmon-pink background, typically occurring at the extensor surfaces as well as the natal cleft (as in this patient), groin and umbilicus. Management advised by NICE is:

- Potent topical corticosteroid and vitamin D preparation applied separately at different times of the day
- Review at four weeks; if responding continue, if treatment fails either continue or change vitamin D to twice a day and stop corticosteroid
- Review at eight weeks; treat with vitamin D twice a day only. If not improving after 8–12 weeks of treatment, then a potent corticosteroid (for 4 weeks) or coal tar preparations once or twice daily can be given.

In ongoing treatment failure then consider combination treatment with topical corticosteroid and vitamin D. Patients should be advised to have corticosteroid treatment breaks after eight weeks of corticosteroid treatment to one area.

A	Coal tar

Coal tar would be an appropriate treatment option if topical steroids and vitamin D treatments fail.

C	Topical salicylic acid

Topical salicylic acid is most appropriate if scale is problematic. This patient has some scale, but this has not created a thick layer that would need salicylic acid to breakdown.

D	Methotrexate

Methotrexate is a systemic treatment option for refractory or systemic psoriasis. It would not be indicated at this stage as the condition is limited in area and in systemic effect.

E	Systemic corticosteroids

Systemic corticosteroids are best to be avoided in psoriasis due to risk of severe withdrawal flares when they are stopped.

71628

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Difficulty: Easy

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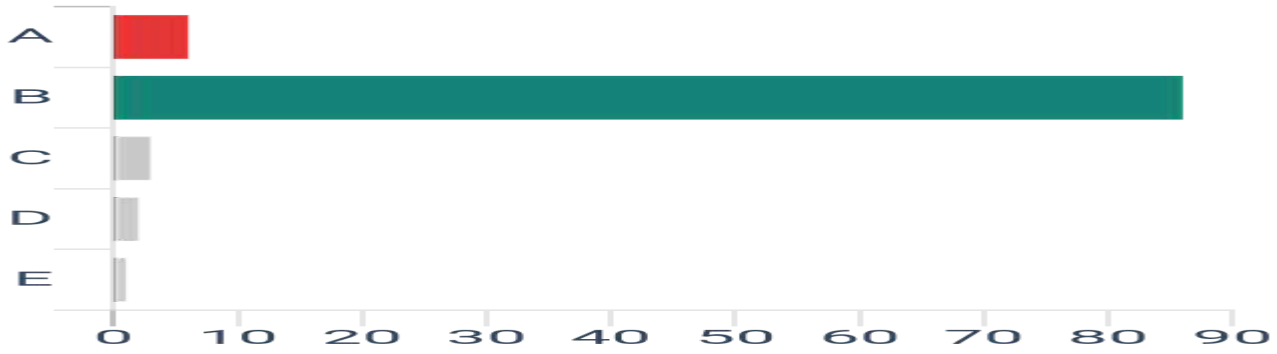

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Responses Correct:	31
Responses Incorrect:	168
Responses Total:	199
Responses - % Correct:	16%

External Links

NICE. Psoriasis
nice.org.uk/guidance/cg153
(https://www.nice.org.uk/guidance/cg153)

A 60-year-old man, who is a known smoker, presents to his General Practitioner (GP) with a two week history of an intensely itchy rash over his arms, legs and trunk. He has developed poor appetite and has lost half a stone in weight. He lives in the New Forest and was previous fit and healthy, with no significant past medical history.

On examination, a distinctive rash is noted over the legs, arms and trunk. It has a wood-grain appearance created by concentric, mildly scaling bands of flat to raised erythema.

Given the presentation, what is the most likely diagnosis of the rash?

Your answer was incorrect

A	Granuloma annulare
B	Erythema chronicum migrans
C	Tinea corporis
D	Erythema gyratum repens (EGR)
E	Erythema annulare centrifugum

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

D	Erythema gyratum repens (EGR)

The answer is Erythema gyratum repens (EGR) (Option D).

EGR is believed to be paraneoplastic in origin. Characteristic concentric, erythematous bands, forming a wood-grain appearance, help distinguish EGR from other rashes. EGR is associated with malignancy in up to 80% of patients. Lung cancer is the most common association, and the smoking history is a strong pointer to this. EGR is also associated with breast, bladder, cervical, stomach and prostate cancers.

Most patients with EGR develop the eruption before the symptoms of an underlying malignancy, with a time difference of up to 6 years. EGR is also associated with certain non-malignant conditions, including pulmonary tuberculosis, systemic lupus erythematosus (SLE) and CREST syndrome (calcinosis, Raynaud's phenomenon, oesophageal dysmotility, sclerodactyly and telangiectasia).

E	Erythema annulare centrifugum

Erythema annulare centrifugum (Option E) is incorrect.

This is a chronic annular and erythematous eruption, associated with a wide range of conditions such as infections, medications and autoimmune disorders.

A	Granuloma annulare

Granuloma annulare (Option A) is incorrect.

Granuloma annulare is a benign inflammatory dermatosis that can affect patients of all ages. It is characterised clinically by papules and annular plaques.

B	Erythema chronicum migrans

Erythema chronicum migrans (Option B) is incorrect.

This appears at the site of the tick bite in about 90% of patients, on average, around 9 days after the inoculation as a result of infection with *Borrelia burgdorferi*. It presents as an enlarging ring formation, which may clear in the centre, leaving a target-like morphology. Dissemination may lead to arthritis (57%), neural involvement (18%) and heart disease, in particular conduction defects (10%). Most non-disseminated disease responds well to oral antibiotics.

C	Tinea corporis

Tinea corporis (Option C) is incorrect.

Tinea corporis usually presents with annular areas of itchy, erythematous, and scaly skin.

A 43-year-old man with a longstanding skin disorder presents to the Emergency Department (ED) as his skin has become markedly erythematous and has spread to involve most of his body. He complains of feeling generally shivery and unwell.

Apparently, he has just started propranolol treatment for benign essential tremor.

Which of the following is the most likely underlying skin condition?

Your answer was incorrect

A	Pemphigus vulgaris
B	Pityriasis rubra pilaris
C	Psoriasis
D	Acne vulgaris
E	Rosacea

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

C	Psoriasis

Erythroderma is the term applied to any inflammatory skin disease that affects more than 90% of the body surface. It is often accompanied with fever, shivering and malaise. Forty per cent of erythroderma is secondary to eczema and 25% secondary to psoriasis. These are the two most common causes. Erythroderma is often associated with metabolic disturbances, and patients may develop hypothermia or high-output cardiac failure. Treatment in hospital is advisable, with careful monitoring of fluid balance and temperature. Propranolol is well recognised as a trigger for worsening of psoriasis.

E	Rosacea

Rosacea is associated with an erythematous pustular rash primarily affecting the nasolabial folds. It doesn't lead to generalised erythroderma.

A	Pemphigus vulgaris

Pemphigus may be associated with extensive bullae, although this doesn't result in the confluent areas of erythema known as erythroderma seen here.

B	Pityriasis rubra pilaris

Pityriasis rubra pilaris is a cause of erythroderma, although it is much rarer than psoriasis and doesn't worsen in patients who are prescribed a beta blocker.

D	Acne vulgaris

Acne vulgaris may become more extensive, for example in response to hormonal triggers, but it isn't usually associated with erythroderma.

33393

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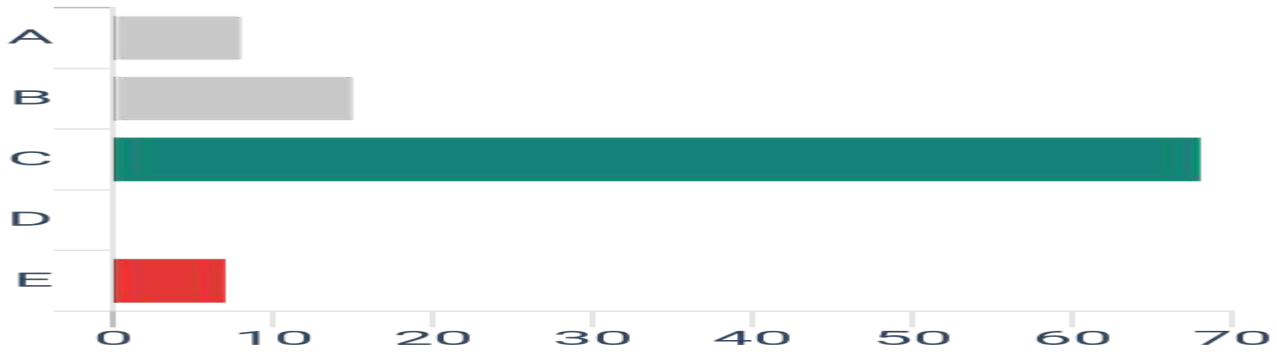
Difficulty: Easy

Peer Responses %



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Responses Correct:	31
Responses Incorrect:	170
Responses Total:	201

A 32-year-old woman presents to the General Medical Clinic with a rash affecting her shins. It has grown slowly over several months and causes no pain. She has no past medical history. She denies any systemic symptoms.

The rash is pictured below:

She undergoes blood tests including full blood count (FBC), renal profile, fasting cholesterol, Thyroid function test and liver function tests are normal.

What is the most appropriate management plan?

Your answer was correct

A	Metformin
B	Insulin
C	Topical steroids
D	No treatment available

E	Aspirin

Explanation

C	Topical steroids

This patient has necrobiosis lipoidica. This is an inflammatory dermatological condition which presents with callous lesions, red-to-brown colour and central atrophy over months to years, typically on the shins of people who are in their 30s and who have diabetes. It does not correlate with level of diabetic control. Management should generally be with potent topical steroids which reduce inflammation but do not help atrophy. If this fails, then immunomodulating drugs can be used.

A	Metformin

Metformin would be the first-line treatment for patients with type 2 diabetes mellitus. The rash is consistent with necrobiosis lipoidica, but not all cases are seen in people with diabetes. The normal investigations and lack of symptoms such as polyuria and polydipsia exclude this as an answer.

B	Insulin

Insulin would be the first-line treatment for patients with type 1 diabetes mellitus or poorly controlled type 2 diabetes, failing other treatments. The rash is consistent with necrobiosis lipoidica, but not all cases are seen in people with diabetes. The normal investigations and lack of symptoms exclude type 1 diabetes, and the age of presentation is also unusual. Improving diabetes control does not reduce this rash.

D	No treatment available

While there is no definitive treatment for necrobiosis lipoidica, there are several options. Topical steroids are useful in reducing inflammation and immunomodulating drugs can help healing, and laser treatments can stabilise erythema and telangiectasia.

E	Aspirin

Antiplatelet therapy does not seem to consistently help. Some trials have shown that pentoxifylline, an alternative antiplatelet, can be used to decrease blood viscosity and increase fibrinolysis.

71604

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Next Question

A 54-year-old man presents to the Endocrinology Clinic for review. He complains that he has gained weight of over four stone over the past two years. He admits to drinking five pints of beer per day. He has hypertension, which is poorly controlled on three agents, and impaired glucose tolerance, for which he is attempting to follow a low-calorie diet.

On examination, his BP is 155/95 mmHg, while his heart rate is 75 bpm and regular. He has abdominal striae and a BMI of 36 kg/m^2. His 24-hour urinary free cortisol is mildly elevated.

Investigations:

Investigations	Results	Normal Values
Haemoglobin (Hb)	131 g/l	135–175 g/l
White cell count (WCC)	7.7 × 10^9/l	4.0–11.0 × 10^9/l
Platelets (PLT)	203 × 10^9/l	150–400 × 10^9/l
Sodium (Na^+)	138 mmol/l	135–145 mmol/l
Potassium (K^+)	3.9 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	110 µmol/l	50–120 µmol/l
Morning cortisol (post low dose dexamethasone)	58 nmol/l	< 50 nmol/l
Glucose	8.1 mmol/l	3.5–5.5 mmol/l

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Cushing's disease
B	Cushing syndrome
C	Glucagonoma
D	Insulinoma
E	Pseudo-Cushing

Explanation

E	Pseudo-Cushing

The most likely explanation here is pseudo-Cushing, which is well described in association with alcoholism and can be associated with both a mildly elevated 24-hour urinary free cortisol level and morning cortisol level post-low-dose dexamethasone suppression test (the cut-off for the upper limit of normal is 50 nmol/l).

B	Cushing syndrome

Cushing syndrome refers to a state of elevated cortisol levels causing hypertension, weight gain, proximal myopathy, hyperglycaemia and abdominal striae. It is a reasonable differential to have for this patient. However, the history of alcohol excess and the minimally raised morning cortisol reading of 58 nmol/ml make pseudo-Cushing more likely.

A	Cushing’s disease

The cortisol level post-dexamethasone suppression test is only mildly elevated (just above the 50 nmol/l cut-off), which confirms Cushing syndrome but could differentiate if the cause is Cushing’s disease or ectopic adrenocorticotrophic hormone production. Furthermore, this patient has significant features of his lifestyle (eg alcohol consumption) that could drive weight gain and be responsible for the symptoms seen here. There are no features to suggest an underlying pituitary adenoma driving his disease. As pituitary tumours enlarge, additional symptoms that may be seen include headache or visual field deficits, classically bitemporal hemianopia, from compression of the optic tract.

C	Glucagonoma

Glucagonomas are associated with hyperglycaemia, diarrhoea and weight loss, which would not fit with the picture of weight gain seen in this patient.

D	Insulinoma

Insulinomas are very rare and associated with episodes of hypoglycaemia, which drives compensatory calorie consumption and weight gain. There are no features here to suggest the patient is suffering from episodes of hypoglycaemia.

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Next Question

A 25-year-old woman attends your General Practice Surgery with severe nodular-cystic acne. She has tried multiple courses of antibiotics, and topical solutions and has read about Roaccutane (isotretinoin) on the Internet. She is concerned about the side effects and wishes to discuss them with you.

Which of the following is the most common side effect you need to warn her about?

Your answer was correct

A	Hair loss is commonly seen in association with therapy
B	LDL cholesterol is commonly increased
C	Low mood is commonly seen in association with therapy
D	She must control her weight because benign intracranial hypertension is commonly seen
E	Patients taking the drug very commonly become anaemic

Explanation

E	Patients taking the drug very commonly become anaemic

Thrombocytopenia, anaemia, thrombocytosis and an increase in ESR are commonly associated with isotretinoin therapy.

A	Hair loss is commonly seen in association with therapy

Alopecia is seen in association with isotretinoin treatment, but thankfully it is rarely seen.

B	LDL cholesterol is commonly increased

An insulin-resistant picture of lipid abnormalities is seen in patients taking isotretinoin, with an increase in triglycerides and a decrease in HDL cholesterol.

C	Low mood is commonly seen in association with therapy

Low mood is seen in association with isotretinoin, as is frank depression, but thankfully these are rarely associated with treatment.

D	She must control her weight because benign intracranial hypertension is commonly seen

BIH, decreased consciousness and seizures are reported in association with isotretinoin, but these are very rare occurrences.

38303

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Difficulty: Difficult

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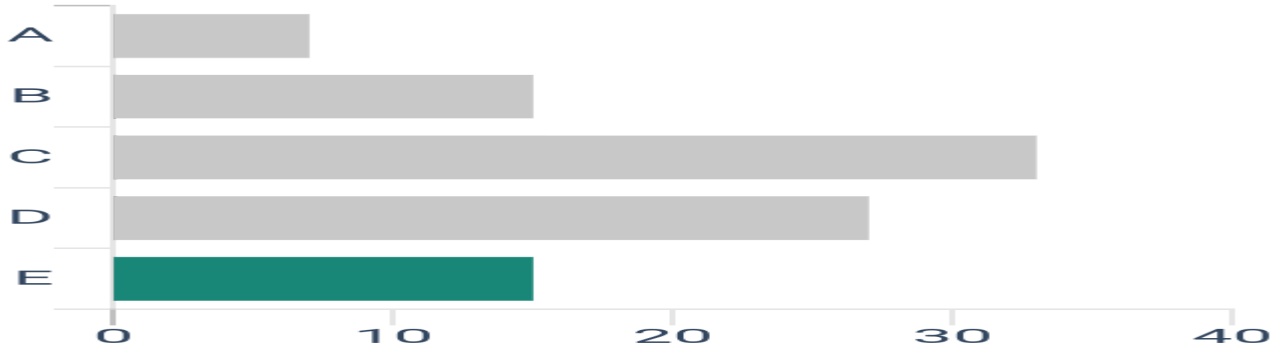

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Responses Correct:	33
Responses Incorrect:	171
Responses Total:	204
Responses - % Correct:	16%

External Links

A 40-year-old woman is referred to the Endocrine Clinic with diabetes mellitus and hypertension. She tells you that she has gained 23 kg in weight over the past 18 months and her blood glucose is not controlled (a recent HbA1c is 65 mmol/mol), despite taking metformin, liraglutide, and long-acting insulin in combination. Her blood pressure (BP) is 155/95 mmHg. She has also developed hirsutism and acne.

Her condition is shown in the picture below:

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Apr 6, 2025

Which of the following is the most useful next investigation?

Your answer was incorrect

A	Insulin-like growth factor 1 (IGF-1)
B	Oral glucose tolerance test with growth hormone measurement
C	Thyroid-stimulating hormone (TSH)
D	24-hour urinary metanephrines
E	24-hour urinary free cortisol

Explanation

E	24-hour urinary free cortisol

The suspicion in a patient with rapid weight gain, hirsuitism, acne, impaired glucose tolerance and hypertension is that they have developed Cushing syndrome. Adrenal causes of Cushing syndrome versus a pituitary adenoma may be associated with a greater degree of hyperandrogenism, and hence with more marked hirsutism and acne in women. The patient can be given a urine bottle when she leaves the clinic. Hence 24-hour urinary free cortisol represents an ideal initial screening test for Cushing syndrome.

D	24-hour urinary metanephrines

Although impaired glucose tolerance is seen in patients with phaeochromocytoma, for which metanephrines are a screening test, phaeochromocytoma would not be associated with the marked weight gain and signs of hyperandrogenism seen here.

A	Insulin-like growth factor 1 (IGF-1)

IGF-1 is most useful in screening for acromegaly, as it is elevated in patients with growth hormone excess. The features here fit better with Cushing syndrome, rather than a diagnosis of acromegaly.

B	Oral glucose tolerance test with growth hormone measurement

This may be used as a confirmatory test for acromegaly where growth hormone fails to be suppressed. Here the features are consistent with Cushing syndrome, rather than acromegaly.

C	Thyroid-stimulating hormone (TSH)

Hypothyroidism could account for the weight gain seen here, but it would not account for the marked deterioration in glucose tolerance, nor for the hirsutism and acne seen in this patient.

71647

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Difficulty: Easy

An 18-year-old woman presents to her General Practitioner (GP) with circular lesions on her hands. They have a raised, palpable border. She also has similar lesions on her feet:

Which one of the following investigations is most important?

Your answer was incorrect

A	Thyroid function tests
B	Anti-endomysial antibodies
C	Prolactin levels
D	Glycated haemoglobin levels (HbA1c)
E	Urine levels of 2-pyridone and 2-methyl nicotinamide

Explanation

D	Glycated haemoglobin levels (HbA1c)

Diabetes mellitus is commonly thought to be associated with the development of granuloma annulare. Other skin disorders associated with diabetes include necrobiosis lipoidica, and insulin injection-related lipodystrophy.

E	Urine levels of 2-pyridone and 2-methyl nicotinamide

Urine metabolite tests can be used to aid the diagnosis of pellagra, however the condition is not commonly associated with developing granuloma annulare. Skin signs that point towards a diagnosis of pellagra include: symmetrical, itchy areas of dermatitis in sun exposed sites, mucosal exfoliation and areas of thickened, darkened skin.

A	Thyroid function tests

Granuloma annulare presents as ring-like lesions with raised edges that enlarge centrifugally. Lesions may be solitary or multiple and usually present on the dorsal aspect of the hands and feet. They are usually asymptomatic and are more common in females under the age of 30 years. Hypothyroidism is not typically associated with developing granuloma annulare. Cutaneous signs commonly associated with hypothyroidism include: loss of hair in the outer third of eyebrows, brittle nails, and myxoedema.

B	Anti-endomysial antibodies

Detection of anti-endomysial antibodies is used in the diagnosis of coeliac disease which is not commonly associated with developing granuloma annulare. Dermatitis herpetiformis (an intensely itchy vesicular rash) on the other hand, is a well recognised cutaneous eruption encountered in patients with coeliac disease.

C	Prolactin levels

Multiple conditions are known to lead to prolactin imbalances, but none of them are typically associated with developing granuloma annulare.

71330

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Difficulty: Average

A 35-year-old farmer presents to his General Practitioner (GP) with a rash over his back, face, neck and forearms. He has a history of pulmonary tuberculosis (TB) as a child, but no other medical history of note.

In the last week, he has felt that his knees and hands have been stiff and painful.

The appearance of the rash is shown in the photograph below:

What is the most likely diagnosis?

Your answer was incorrect

A	Lyme disease
B	Lupus vulgaris
C	Discoid lupus erythematosus
D	Psoriasis
E	Cattle ringworm

Explanation

C	Discoid lupus erythematosus

This is a chronic, scarring, photosensitive dermatosis. Up to 28% of patients with DLE may later develop systemic lupus erythematosus (SLE), and DLE can occur as a feature of SLE. DLE usually presents without significant systemic features. The findings are typically of erythematous, scaly plaques on sun-exposed areas, particularly the face and scalp. Lesions heal with scarring and can result in significant alopecia on the scalp.

Dyspigmentation can be prominent, especially in darker skin types. Pruritus and a stinging sensation are variable and some individuals are asymptomatic. The diagnosis can be confirmed on skin biopsy. In the absence of SLE, autoantibodies are usually negative. Treatment is with sun protection and very potent topical corticosteroids; refractory cases will require oral antimalarial agents and sometimes systemic immunosuppressive therapy.

E	Cattle ringworm

Animal ringworm (dermatophyte infection) tends to be more inflammatory than the usual strains causing disease in humans. It would still usually present as a solitary plaque at the site of inoculation and not the more widespread eruption described in the scenario.

A	Lyme disease

The initial skin manifestation of Lyme disease is erythema chronicum migrans, which presents as an expanding annular lesion centred around the site of the infecting tick bite.

B	Lupus vulgaris

This presents as a solitary, very slowly enlarging, infiltrating plaque, rather than the multifocal eruption in the image.

D	Psoriasis

The distribution described in this scenario suggests a photosensitive eruption rather than psoriasis. The lesions in the photograph are more irregular than would be expected in psoriasis. A closer view would help to confirm that there is no silvery scale.

6351

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Difficulty: Average

A 35-year-old man presents to his General Practitioner (GP) with several small ‘spots’ on his right hand. He says these ‘spots’ have been present for several months and have increased in number. He is sure that there was only one at the very start but that adjacent fingers became involved with time. He is otherwise fit and well and is not on any medications.

Examination of the patient’s hand shows several skin-coloured exophytic nodules that are not inflamed. There is minimal scaling, but the lesions tend to be found on adjacent skin surfaces.

What would be the most likely diagnosis?

Your answer was incorrect

A	Human papilloma virus (HPV)
B	Molluscum contagiousum
C	Pompholyx eczema
D	Squamous cell carcinoma
E	Keratoacanthoma

Explanation

A	Human papilloma virus (HPV)

Such infections cause benign, self-limiting warts that are usually found on the hands and fingers. The term ‘kissing warts’ has been applied to this kind of infection due to the autoinoculation that may occur from a wart on one finger causing the occurrence of warts on an adjacent finger. The virus can be spread by direct or indirect contact and can resist desiccation, freezing and prolonged storage outside of host cells. The diagnosis is made primarily on clinical findings.

D	Squamous cell carcinoma

SCC is a common type of non-melanoma skin cancer that present as enlarging, often tender, scaly or ulcerated lesions. SCCs are particularly prevalent in elderly. Risk factors include: sun exposure, smoking, fair skin, blue eyes and blond or red hair.

B	Molluscum contagiousum

Molluscum contagiosum is a common viral skin infection that causes localised clusters of round, pearly papules with a central pit. It is commonly seen in children and is spread by direct skin-to-skin contact, indirect contact (e.g. via shared towels), and auto-inoculation via scratching.

C	Pompholyx eczema

Pompholyx is a type of eczema that causes tiny blisters to develop across the fingers, palms of the hands and sometimes the soles of the feet. Treatment is with topical steroids and avoidance of contact with allergens.

E	Keratoacanthoma

Keratoacanthomas are thought to be a variant of SCC. They are rapidly enlarging lesions with central keratin plugging that enlarge over months and may then resolve spontaneously. They should be treated as SCCs.[6797]

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Difficulty: Difficult

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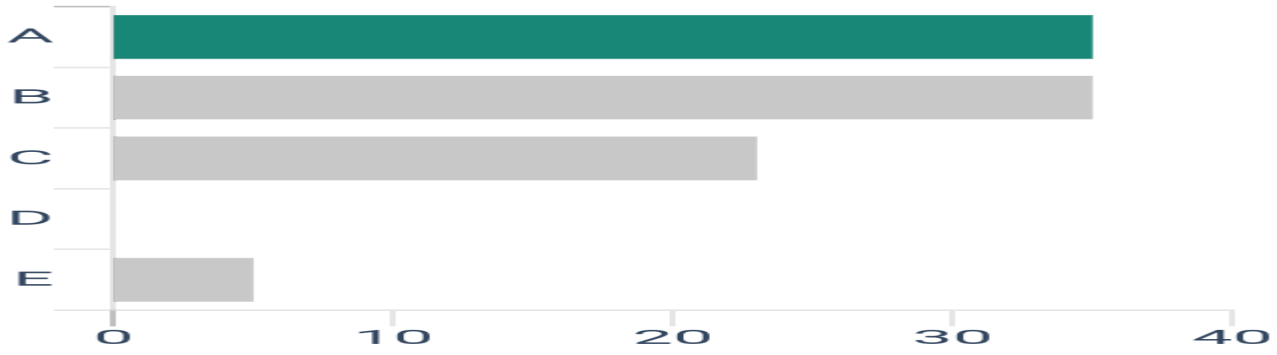

Session Progress

Responses Correct:	33
Responses Incorrect:	175
Responses Total:	208

A 33-year-old woman presents to the Dermatology Clinic with recurrent lesions on the sole of her left foot. She has a background of inflammatory bowel disease (IBD), for which she takes adalimumab. The lesions have previously been managed unsuccessfully with cryotherapy. They are making her feel self-conscious when she is swimming; however, they are not painful and not negatively impacting on her daily life in a significant way.

The lesions are presented below:

What is the most appropriate management step?

Your answer was incorrect

A	Discharge without treatment
B	Further cryotherapy
C	Stop adalimumab
D	Surgical excision
E	Topical salicylic acid

Explanation

A	Discharge without treatment

These are plantar warts. The patient is immunocompromised, as she is on a biologic treatment. The options here are limited, as the patient has numerous warts, unsuccessfully treated with cryotherapy. The patient's warts are crucially not impacting on her daily life, so it would be unreasonable to stop adalimumab, which is controlling their IBD effectively. Therefore, weighing up the options, the most appropriate step would be to discharge without treatment.

C	Stop adalimumab

The patient's warts are crucially not impacting on her daily life, so it would be unreasonable to stop adalimumab, which is controlling her IBD effectively.

B	Further cryotherapy

There are multiple lesions in this case, with at least six lesions being evident on the image. To undertake cryotherapy on numerous warts would be painful and impractical, particularly given this has been previously unsuccessful. Therefore, this is not the correct option.

D	Surgical excision

These are plantar warts, for which surgical treatment would be inappropriate and possibly ineffective.

E	Topical salicylic acid

There are multiple lesions in this case, with at least six lesions being evident on the image. While salicylic acid treatment is an option, it is unlikely to be successful on such numerous lesions.

71769

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Difficulty: Difficult

A 36-year-old woman presents to her General Practitioner (GP) with fragile skin, blistering, milia and hyperpigmentation over her hands, which occurred after a recent summer holiday to Cyprus.

What is the most likely diagnosis?

Your answer was incorrect

A	Porphyria cutanea tarda (PCT)
B	Acute intermittent porphyria
C	Cutaneous lupus erythematosus
D	Dermatitis herpetiformis
E	Pompholyx

Explanation

A	Porphyria cutanea tarda (PCT)

PCT is the most common of the porphyrias. It is characterised by fragility and blistering of exposed skin following exposure to sunlight. A pathognomonic finding is the presence of milia at sites of healing blisters. PCT is generally acquired and is the result of deficiency of uroporphyrinogen decarboxylase. Other features include scarring alopecia following resolution of bullae on the scalp, hypertrichosis and hyperpigmentation. Risk factors for the development of PCT include alcohol, oestrogens and sunshine, all of which this lady may have been exposed to in Cyprus.

B	Acute intermittent porphyria

Acute intermittent porphyria is a metabolic genetic disorder affecting the production of haem. It may present with a wide range of symptoms (such as abdominal pain, dark urine, anxiety and confusion) but is not associated with cutaneous manifestations.

C	Cutaneous lupus erythematosus

Systemic lupus erythematosus (SLE) is an autoimmune connective tissue disorder. About 80% of patients with SLE have skin involvement (cutaneous lupus erythematosus), and it is the first sign of SLE in about one-quarter of these patients. SLE-specific lesions tend to be induced or aggravated by exposure to ultraviolet light and are localised in sun-exposed sites such as the face, neck and upper back. It may present with a variety of cutaneous signs (such as a malar or butterfly rash, blistering and alopecia) and can take both acute and chronic forms.

D	Dermatitis herpetiformis

Dermatitis herpetiformis occurs in close association with coeliac disease and presents with very itchy grouped vesicles, most frequent on the extensor surface of the knees, elbows, buttocks and shoulders. Treatment is with dapsone and a gluten-free diet.

E	Pompholyx

This is a subtype of eczema that occurs in the hands and feet due to the presence of sweat. It presents with recurrent crops of vesicles and blisters which cause intense itch.

A 30-year-old woman attends her General Practitioner (GP) Surgery with a seven day history of malaise, fatigue, dry cough and shortness of breath on exertion. Three days ago, she developed an itchy rash. She is asthmatic and takes salbutamol inhalers regularly.

On examination, she has cold sores on her upper lip. There are annular plaques present on the forearms, trunk and lower limbs. Some are clearing in the centre. There are a few vesicles. The throat is inflamed and the tonsils enlarged. The chest is clinically clear, but there are striking changes on X-ray suggestive of right lower lobe consolidation.

Investigations reveal the following:

Investigation	Result	Normal values
Haemoglobin (Hb)	100 g/l	135–175 g/l
White cell count (WCC)	8.2×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	500×10^9/l	$150–400 \times 10^9$/l
Sodium (Na^+)	139 mmol/l	135–145 mmol/l
Potassium (K^+)	4.9 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	100 µmol/l	50–120 µmol/l
Coomb's test	+	

What is the most likely cause of her respiratory symptoms?

Your answer was incorrect

A	Pneumococcal pneumonia
B	*Haemophilus influenzae* type B pneumonia
C	Chicken pox
D	Pulmonary vasculitis
E	*Mycoplasma* pneumonia

Explanation

E	*Mycoplasma* pneumonia

Mycoplasma pneumonia can present with dermatologic manifestations, which can range from a mild erythematous maculo-papular or vesicular rash (which is most commonly seen accompanying respiratory tract infections) to Stevens-Johnson syndrome. Subclinical haemolytic anaemia can present in patients with *Mycoplasma*, which are suggested by a positive Coomb's test. WCC can be normal in up to 90% of cases and can be accompanied by thrombocytosis, most likely due to an acute phase response.

This lady has a rash consistent with erythema multiforme, with symptoms of an upper respiratory tract infection preceding the eruption. She may well have suffered *Mycoplasma* pneumonia that has begun to resolve after antibiotic therapy.

Around 90% of erythema multiforme cases are usually associated with infections.

The single most common trigger for developing erythema multiforme is herpes simplex virus (HSV) infection, and usually precedes the skin eruption by 3–14 days. *Mycoplasma* pneumonia is the next most common trigger.

Other viral infections include:

- Parapoxvirus (orf and milkers' nodules)
- Herpes varicella zoster (chickenpox, shingles)
- Adenovirus
- Hepatitis viruses
- Human immunodeficiency virus (HIV)
- Cytomegalovirus
- Viral vaccines.

Dr. Jamil Alrajhi

Apr 6, 2025

The initial lesions are sharply demarcated, round, red/pink and flat (macules), which become raised (papules/palpable) and gradually enlarge to form plaques (flat raised patches) up to several centimetres in diameter. The centre of the papule/plaque darkens in colour and develops surface (epidermal) changes such as blistering or crusting. Lesions usually evolve over 72 h. The typical target lesion (also called iris lesion) of erythema multiforme has a sharp margin, regular round shape and three concentric colour zones: the centre is dark red, the next ring is paler and raised due to oedema and the outermost ring is bright red.

Mycoplasma pnuemonia usually presents with vague and slow-onset history over a few days or weeks of constitutional upset, fever, headache, dry cough with tracheitic ± pleuritic pain, myalgia, malaise and sore throat. Raynaud's phenomenon may also be seen in *M. pneumoniae* infection, possibly secondary to cold agglutinin formation. *Mycoplasma* and *Chlamydophila* spread by person-to-person contact, and spread is most common in closed populations - e.g. schools, offices. This is like many of the common viral illnesses, but the persistence and progression of symptoms is what helps to mark it out.

D	Pulmonary vasculitis

Pulmonary vasculitis, such as granulomatosis with polyangiitis (GPA) and microscopic polyangiitis (MPA), is likely to manifest with a mixture of both upper and lower respiratory tract symptoms and signs. Upper respiratory symptoms and signs include rhinosinusitis, nasal discharge and nasal crusting. Lower respiratory tract symptoms and signs include cough, haemoptysis, dyspnoea and pleuritic chest pain.

A	Pneumococcal pneumonia

This usually presents with abrupt illness with rigors, cough and myalgia in young patients similar to this case. It is not commonly associated with erythema multiforme.

B	*Haemophilus influenzae* type B pneumonia

This patient is likely to have been vaccinated for *H. influenzae*, and therefore the chance of developing *Haemophilius* influenza is likely, especially if she is not immunosuppressed. Furthermore, *Haemophilus* influenza is more likely to affect the oldest and youngest groups.

C	Chicken pox

Varicella-zoster infection manifests first as macules and then as vesicles, which then become crusted papules rather than the annular plaques seen in this case.

This lady has a rash consistent with erythema multiforme with symptoms of an upper respiratory tract infection preceding the eruption. She may well have suffered mycoplasma pneumonia, which has begun to resolve after antibiotic therapy. Clinical signs which are out of kilter when compared to x-ray appearance are also a feature of mycoplasma. Individual target lesions last several days resolving with transient hyperpigmentation. Erythema multiforme has also been described as occurring some 1–2 weeks after a herpes virus infection. Treatment of any underlying infection, in this case with a macrolide antibiotic, leads to a resolution of the rash.

A 35-year-old man presents to the Dermatology Clinic with red plaques on his legs. His General Practitioner (GP) prescribed betamethasone and calcipotriol ointment. He has no past medical history of note apart from two episodes of previous depression, but admits to drinking 10 pints of beer per week and smokes 10 cigarettes per day. The topical treatment gave limited benefit. He is willing to take systemic therapy, but doesn't want to use oral corticosteroids.

Examination reveals the lesions shown below, nail changes on both hands and painful DIP joints.

Investigation	Result	Normal values
Haemoglobin (Hb)	129 g/l	135–175 g/l
White cell count (WCC)	8.1×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	190×10^9/l	$150–400 \times 10^9$/l
Bilirubin	10 µmol/l	2–17 µmol/l
Creatinine (Cr)	110 µmol/l	50–120 µmol/l
Alanine aminotransferase (ALT)	40 U/l	7–55 U/l

Which of the following is the most appropriate intervention?

Your answer was incorrect

A	Methotrexate
B	Acitretin
C	Adalimumab
D	Dithranol
E	Infliximab

Explanation

A	Methotrexate

This gentleman has chronic plaque psoriasis, and has partially responded to topical steroid and vitamin D analogue treatment. With extensive changes including early possible psoriatic arthritis, methotrexate is the most appropriate next step.

B	Acitretin

Acitretin is an appropriate intervention for psoriasis but is potentially not the optimal choice here given the signs of psoriatic arthritis.

C	Adalimumab

Adalimumab is a biological option where patients fail to respond adequately to methotrexate.

D	Dithranol

Topical dithranol is an option for the lesions on the lower limbs, but won't impact on the early features of psoriatic arthritis in the hands.

E	Infliximab

Like adalimumab, infliximab is a biological option for patients who fail to respond to methotrexate or other traditional DMARDs.

A 27-year-old woman presents to the Dermatology Clinic with a nine month history of headaches and a worsening rash on her face. Her appetite has increased a little, and although she has always been overweight, she is concerned that this has further increased over the past year or so.

On examination, her body mass index (BMI) is 31 kg/m^2. Her blood pressure (BP) is 152/89 mmHg, while her pulse is 74 beats per minute (bpm) and regular. A fasting blood glucose level is recorded as 6.0 mmol/l. She has severe facial acne, as shown in the photograph below:

Which underlying diagnosis should you consider?

Your answer was incorrect

A	Congenital adrenal hyperplasia
B	Systemic lupus erythematosus (SLE)
C	Hypothyroidism
D	Sarcoidosis
E	Polycystic ovarian syndrome (PCOS)

Explanation

E	Polycystic ovarian syndrome (PCOS)

Acne presenting at beyond aged 20 years should always prompt investigation of a possible secondary cause. Acne accompanying polycystic ovarian syndrome is caused by modestly raised circulating androgen levels. It should always be considered in obese females with oligomenorrhoea, secondary amenorrhoea or infertility. Glucose intolerance, (note the glucose is at the very upper end of the normal fasting range), dyslipidaemia and hypertension may be other features. Weight loss is the most important intervention.

A	Congenital adrenal hyperplasia

Non-classical adrenal hyperplasia can present with later features of hyperandrogenism rather than the usual salt wasting in infancy, but it is significantly rarer than PCOS.

B	Systemic lupus erythematosus (SLE)

SLE is associated with a photosensitive erythematous rash rather than the acneiform picture seen here.

C	Hypothyroidism

Hypothyroidism is associated with a ‘peaches and cream’ complexion and brittle hair with areas of hair loss, rather than the picture seen here.

D	Sarcoidosis

Sarcoidosis is associated with erythema nodosum rather than an acneiform skin rash like that seen here. The absence of other features of sarcoidosis, such as a dry cough or hypercalcaemia, also counts against this as the underlying diagnosis.

6287

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Difficulty: Easy

A 45-year-old woman presents to the Dermatology Clinic with a sudden onset of itchy, raised lesions all over her body affecting her arms, legs and face for the last three weeks. It was partially relieved by desloratadine (antihistamine). Her GP prescribed 30 mg prednisolone for three days, which has afforded little benefit.

Routine blood tests checked by the GP are unremarkable, apart from a slight increase in her eosinophil count. The rash is extensive on her leg.

What is the next appropriate management option?

Your answer was correct

A	Refer for skin-prick testing
B	Refer for radioallergosorbent testing

C	Increase prednisolone to 60 mg for six days
D	Switch desloratidine to cetirizine
E	Screen for anti-tissue transglutaminase antibodies

Explanation

D	Switch desloratidine to cetirizine

The image shows large areas of raised white wheals with an erythematous border in keeping with urticaria. Blood testing including allergy screening is not routinely recommended in the management of urticaria, which may occur as part of an allergic or non-allergic process. Most patients find that antihistamines, at a regular dose, give some relief. Cetirizine may have greater pharmacodynamic effect in certain individuals than desloratidine.

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A	Refer for skin-prick testing

Studies suggest that the prevalence of positive skin prick tests in patients with urticaria is high, but there is little link to avoidance of triggers or exposure to them and response in terms of resolution or worsening of the skin rash.

B	Refer for radioallergosorbent testing

Radioallergosorbent testing is an antibody-based test conducted using a blood sample where a specific allergen is either known or strongly suspected. This isn't the case in idiopathic urticaria.

C	Increase prednisolone to 60 mg for six days

The benefit risk of using high-dose steroids in the treatment of urticaria is not positive because of a slow and limited response in terms of the rash, and side effects of therapy.

E	Screen for anti-tissue transglutaminase antibodies

The rash of dermatitis herpetiformis, associated with gluten intolerance, is a blistering rash rather than the wheal and flair-type reaction seen here.

Dr. Jamil Alrajhi

Apr 6, 2025

A 21-year-old man presents to his General Practitioner (GP) with a painful right knee. He does not recall any injury.

On examination, he has a non-itchy rash on his hands and feet, shown below:

He also has reddened conjunctivae.

On questioning, he has had some mild dysuria and a painless penile rash.

What is the most likely underlying cause?

Your answer was incorrect

A	*Candida albicans*
B	*Chlamydia trachomatis*

C	*Helicobacter pylori*
D	*Borrelia burgdorferi*
E	Gluten-sensitive enteropathy

Explanation

B	*Chlamydia trachomatis*

This is reactive arthritis, and the rash is termed keratoderma blenorrhagica. It occurs secondary to *C. trachomatis* (which may also cause circinate balanitis, as in this case), *Salmonella*, *Shigella*, *Campylobacter jejuni* and *Yersinia*. Stool should be cultured if diarrhoea is present, and a urethral swab/sexual review should be performed, as urethritis may be asymptomatic. Arthritis is managed with rest, non-steroidal anti-inflammatory drugs (NSAIDs) and steroids, as it does not tend to respond to treatment of the underlying infection.

Image Source: https://commons.wikimedia.org/wiki/File:Feet-Reiters_syndrome.jpg Photo Credit:Content Providers(s): CDC/ Dr. M. F. ReinTranswiki approved by: w:en:User:Dmcdevit, Public domain, via Wikimedia Commons

D	*Borrelia burgdorferi*

Infections with this pathogen are transmitted via the Ixodes tick and lead to Lyme disease. The disease starts with a rash (erythema chronicum migrans) and can progress to arthritis, neural involvement and heart disease. Non-disseminated disease responds well to treatment with doxycycline.

A	*Candida albicans*

In immunocompromised individuals, *Candida* can affect a wide spectrum of systems. In immunocompetent hosts, infections are usually (but not always) limited to the mouth or vagina (thrush).

C	*Helicobacter pylori*

Even though other gastrointestinal infections are closely linked with reactive arthritis, *H. pylori* has only rarely been implicated in this process.

E	Gluten-sensitive enteropathy

This is associated with dermatitis herpetiformis, an itchy vesicular rash most frequently seen on the extensor surface of the knees, elbows, buttocks and shoulders. Treatment is with dapsone and a gluten-free diet.

A 28-year-old man presents to his GP with multiple pale, scaly patches on his upper chest and back. He reports that the patches have been present for several months and become more noticeable after sun exposure. He experiences mild itching but denies pain or other systemic symptoms. The patient is otherwise healthy and has no significant medical history.

On examination, there are multiple hypopigmented, slightly scaly macules on the upper chest and back. A potassium hydroxide preparation of skin scrapings shows a 'spaghetti and meatballs' appearance consistent with *Malassezia* yeast.

What is the most appropriate initial treatment for this patient's condition?

Your answer was incorrect

A	PO terbinafine
B	Topical ketoconazole shampoo
C	PO griseofulvin
D	High-potency topical corticosteroids
E	PO itraconazole

Explanation

B	Topical ketoconazole shampoo

Topical ketoconazole is highly effective against *Malassezia* species, which cause pityriasis versicolor. Pityriasis versicolor is a superficial fungal infection caused by *Malassezia* species, presenting as hypopigmented or hyperpigmented patches with mild scaling. Ketoconazole shampoo can be applied to the affected areas, which is left on for several minutes and then rinsed off, providing effective treatment with minimal systemic absorption and side-effects.

E	PO itraconazole

PO itraconazole can be effective for pityriasis versicolor, particularly in extensive or recurrent cases. However, topical therapy is typically preferred as a first-line treatment due to a lower risk of systemic side-effects.

A	PO terbinafine

PO terbinafine is effective for dermatophyte infections but is not first line for pityriasis versicolor, as it does not target the *Malassezia* yeast as effectively. Topical agents are generally preferred for initial treatment in localised cases.

C	PO griseofulvin

Griseofulvin is used primarily for dermatophyte infections, such as tinea corporis, and is not effective against *Malassezia* yeast. It is not indicated in the management of pityriasis versicolor.

D	High-potency topical corticosteroids

Corticosteroids do not treat the fungal cause of pityriasis versicolor and may worsen the condition by reducing the immune response locally. Antifungal therapy is needed to manage the infection.

74423

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Difficulty: Average

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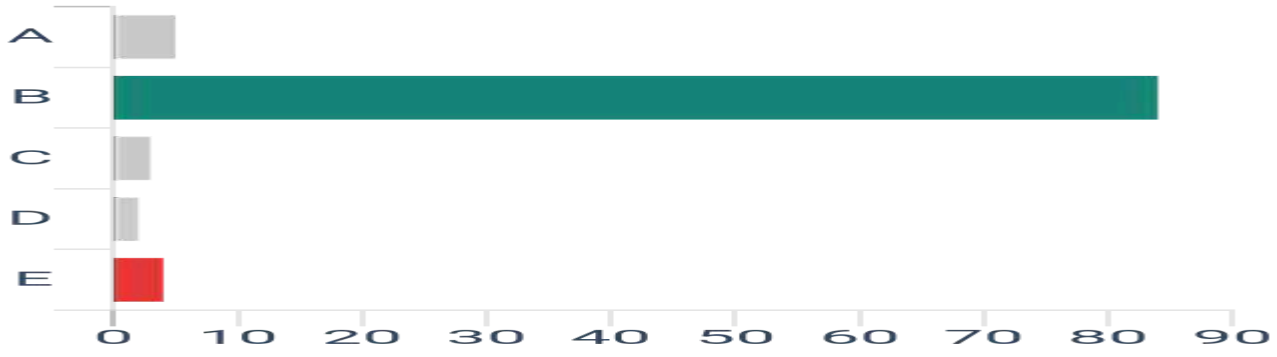

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A 33-year-old man presents to the General Medical Clinic. He complains of intermittent symptoms of bloating and diarrhoea. He has found that his symptoms are particularly worse after drinking alcohol. He feels that his abdomen sometimes feels uncomfortable. He does not think he has passed any blood in his stool. He denies any family history of bowel cancer.

He is fully examined. His abdomen is soft and non-tender, but his nails appear abnormal.

A photograph of one of his nails is shown below:

His General Practitioner (GP) has already requested routine blood tests, and you can see the results of a full blood count (FBC), urea and liver function tests (LFTS)., Electrolytes and coeliac screens are pending.

What further investigations would be appropriate at this point?

Your answer was incorrect

A	Nailfold dermatoscopy
B	X-rays of hands
C	Check ferritin level

Dr. Jamil Alrajhi
Apr 6, 2025

D	CT scan of the chest, abdomen and pelvis
E	HIV serology

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

C	Check ferritin level

This patient has koilonychia. This is a nail deformity most commonly seen due to iron deficiency anaemia. Other potential causes include regular contact with petroleum-based substances, haemochromatosis and trauma. Koilonychia can also be idiopathic. In the first instance, investigation should confirm iron deficiency anaemia and attempt to determine an underlying cause. In a patient with a history of bowel problems, coeliac disease should be excluded. If the history was suggestive of it, then inflammatory bowel disease should also be excluded.

B	X-rays of hands

This could have been considered an appropriate investigation if the patient had psoriatic nail changes as these can affect hand joints and would be demonstrated on X-ray. Psoriatic arthritis X-ray features include:

- enthesitis and marginal bone erosions; may develop ‘pencil-in-cup’ appearance
- joint subluxation
- periostitis: may appear as a thickened cortex or new layer of bone.

Psoriatic nail changes include onycholysis, separation of the nail plate from the nail bed, leukonychia, pitting and ridging. These signs are not seen in this patient, therefore excluding an X-ray as a choice for investigation.

A	Nailfold dermatoscopy

Nailfold dermatoscopy is an investigation which can be useful in distinguishing between primary and secondary Raynaud’s disease. Secondary Raynaud’s is suggestive of systemic sclerosis. This patient does not have features of Raynaud’s: colour changing between blue, white and red in response to cold.

D	CT scan of the chest, abdomen and pelvis

A CT scan would be appropriate if this patient had a diagnosis of malignancy and a staging scan would be necessary to assess for metastatic disease and lymphadenopathy. While the nail changes may suggest underlying iron deficiency anaemia, which can in some patients be caused by gastrointestinal malignancy, this investigation would not be appropriate without further evidence of malignancy due to the high radiation exposure and potential for contrast-induced nephropathy.

E	HIV serology

Neither HIV infection nor an immunodeficiency disease is likely to be a cause in this patient. There is no evidence of behaviour which would lead to HIV exposure and there is no evidence of any opportunistic infection.

71625

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Difficulty: Easy

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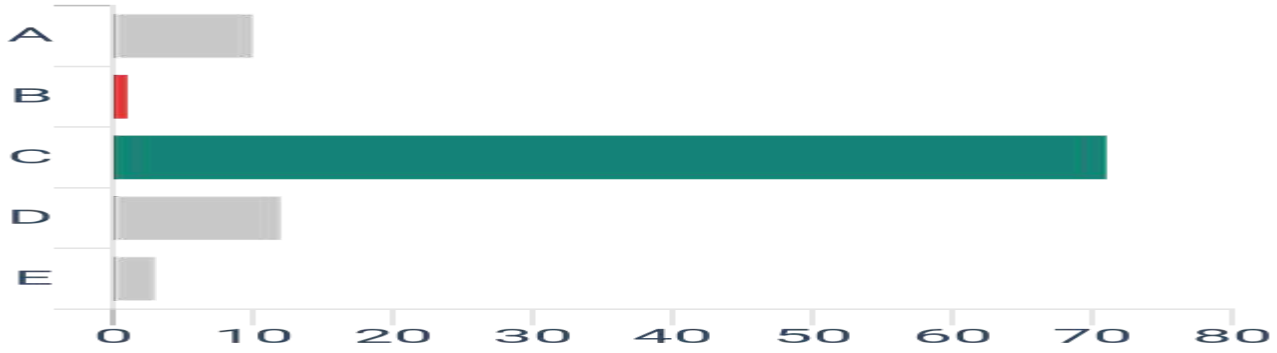

Session Progress

Responses Correct:	34
Responses Incorrect:	183
Responses Total:	217
Responses - % Correct:	16%

Koilonychia

A 69-year-old man with non-Hodgkin's lymphoma, currently in remission, was admitted with pneumonia. He was given tazocin intravenous (IV). Two days later, he developed an erythematous maculo-papular rash all over his body.

The next day, a student nurse fast bleeps you to the ward as she noticed that his skin was 'falling off' as she was turning him over. You arrive to see him in a puddle of fluid, with sheets of skin loss and other areas of dusky skin necrosis. His conjunctivae are red and his mouth has multiple blisters.

What is the most likely underlying pathophysiology of this mucocutaneous drug reaction?

Your answer was incorrect

A	Cytotoxic IgG or IgM antibodies
B	Drug-antibody immune complex
C	Eosinophilic drug response
D	Cytotoxic T cells and apoptosis
E	IgE-mediated reaction involving release of histamine from mast cells

Explanation

D	Cytotoxic T cells and apoptosis

The description is of classic toxic epidermal necrolysis (TEN), which is mediated by an early cytotoxic T-cell response followed by Fas ligand binding to Fas (death receptors) on keratinocytes, which trigger apoptosis.

E	IgE-mediated reaction involving release of histamine from mast cells

This leads to a type 1 hypersensitivity reaction and an anaphylaxis-type reaction.

A	Cytotoxic IgG or IgM antibodies

These lead to a type 2 hypersensitivity reaction such as thrombocytopaenic purpura.

B	Drug-antibody immune complex

Drug-antibody immune complexes lead to a type 3 hypersensitivity reaction such as serum sickness.

C	Eosinophilic drug response

Drug reaction with eosinophilia and systemic symptoms, (DRESS) is associated with a morbilliform skin reaction which progresses to a generalised folliculitis, rather than the picture seen here.

38315

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Difficulty: Average

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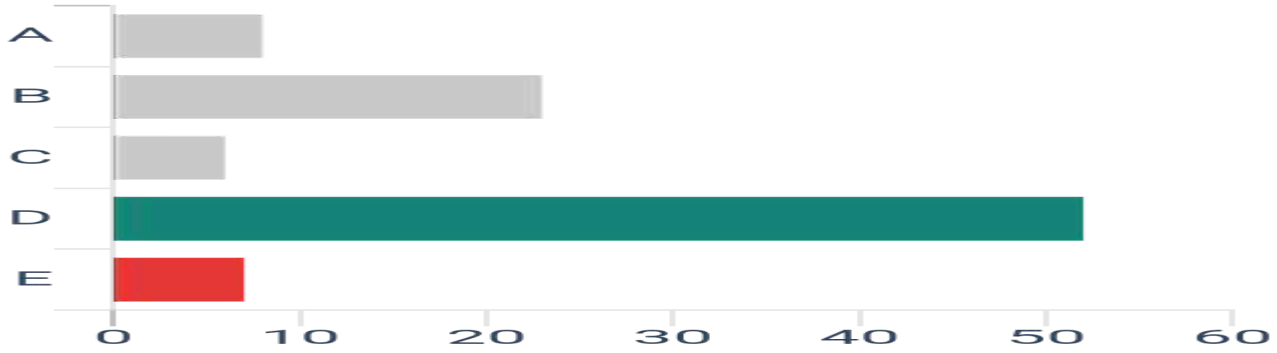

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Responses Total:	218
Responses - % Correct:	16%

An 18-year-old man presents to the Dermatology Clinic with a seven day history of rash, affecting his whole body. He had a cold sore, a sore throat and fever 10 days ago and was given erythromycin by his General Practitioner (GP). The rash is not particularly itchy and there are no mucosal lesions.

Routine bloods reveal a small increase in erythrocyte sedimentation rate (ESR) and a white cell count (WCC) just above the upper limit of the normal range.

The rash is seen below:

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Scabies
B	Secondary syphilis
C	Varicella zoster virus
D	Erythema multiforme
E	Hand, foot and mouth disease

Explanation

D	Erythema multiforme

Erythema multiforme is an acute, self-limiting illness triggered by infections including HSV and CMV. Less than 10% of cases are triggered by drugs. It causes erythematous macules, papules and target lesions on the palms and soles.

Clinical criteria for diagnosis:
1) Acute, self-limiting illness with duration <4weeks
2) Symmetrical, discrete, round, red papules that persist at the same site for at least 7 days
3) Some papules evolve into target lesions
4) No mucosal involvement (or mucosal involvement is limited to one mucosal surface, usually oral).

C	Varicella zoster virus

VZV is a vesicular rash (vesicles on an erythematous base), classically described as ‘dew drops on a rose petal’. It’s most likely that primary chicken pox infection would also have occurred at an earlier stage in life than age 18.

A	Scabies

Scabies is associated with an intensely itchy, crusting skin rash, particularly in the web spaces on the hands.

B	Secondary syphilis

Although the rash of secondary syphilis can mimic almost any rash, it’s much more likely with modern sexual health counselling that an 18-year-old would have presented to health services at the time of the primary lesion.

E	Hand, foot and mouth disease

Hand, foot and mouth disease is associated with infection by coxsackie viruses A10 and A16 and with enterovirus 71, and produces vesicles and pustules on the hands and feet and mucosal ulcers. Enterovirus is also rarely associated with a polio-like syndrome.

38522

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A 67-year-old woman undergoes a right total hip operation under the care of Orthopaedic Surgeons. They contact you when she is seen in the Follow-up Clinic with a necrotic, violaceous ulcer over the operation scar. Wound swabs and blood cultures show no growth.

Over the last week, the ulcer has grown in size despite the patient taking flucloxacillin 250 mg four times daily. The patient is now also taking potent analgesics to manage the pain.

In her past medical history, she has suffered from hypertension and rheumatoid arthritis. She is a non-smoker and drinks almost no alcohol. She has no allergies.

The dermatologist is contacted, and a skin biopsy is taken.

What is the most appropriate next step in her management?

Your answer was incorrect

A	Revision of operation
B	Flucloxacillin 500 mg qds orally (po)
C	Benzylpenicillin 1.2 g qds and flucloxacillin 1 g qds intravenously (IV)
D	Prednisolone 60 mg once daily (od)
E	Conservative measures only

Explanation

D	Prednisolone 60 mg once daily (od)

High-dose steroids are usually enough to lead to resolution. If that treatment fails, alternative pharmacological interventions, such as ciclosporin or tumour necrosis factor alpha inhibitors, may be required.

E	Conservative measures only

PG is an auto-inflammatory, neutrophilic condition of unclear aetiology, causing painful skin ulceration with characteristic violaceous, undermined borders. The diagnosis should always be considered in non-healing sterile ulcers, particularly when other risk factors (such as rheumatoid arthritis, inflammatory bowel disease and haematological malignancies) are present.

The prognosis for PG is unpredictable, and the ulceration may increase significantly if left untreated. Small ulcers may be treated with topical steroids or tacrolimus; however, larger ones are best treated with oral steroids.

A	Revision of operation

This patient has developed pyoderma gangrenosum (PG) over the site of surgery – demonstrating pathergy. PG is a neutrophilic condition causing painful skin ulceration with characteristic violaceous, undermined borders. Its association with conditions such as rheumatoid arthritis and haematological malignancies is well documented. The diagnosis should always be considered in non-healing sterile ulcers, particularly when other risk factors are present. Operating further on the affected area is likely to increase the size of the ulcer and is best avoided.

B	Flucloxacillin 500 mg qds orally (po)

Antibiotics are often prescribed before making the correct diagnosis. These may be continued if bacteria are cultured in the wound or there is surrounding cellulitis, but they are not helpful for uncomplicated PG.

C	Benzylpenicillin 1.2 g qds and flucloxacillin 1 g qds intravenously (IV)

Given the negative swab results and the typical PG presentation, escalating the course of antibiotics is unlikely to be of any benefit.

6330

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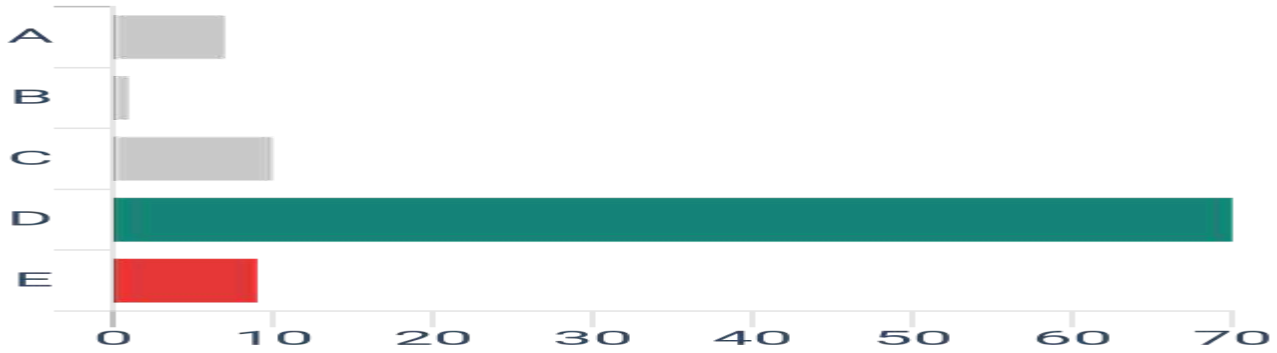

A 56-year-old woman presents to the Dermatology Clinic with a small (0.6 cm), poorly defined, pearly nodule with overlying arborising telangiectasia located in the medial canthus, 5 mm from her left lower eyelid. She is otherwise fit and well.

What would be the most favourable treatment option for avoiding recurrence and achieving the best cosmetic outcome?

Your answer was incorrect

A	Excision with 5mm margin and flap repair
B	Moh's micrographic surgery
C	Radiotherapy
D	Curette and cautery
E	Treatment with Vismodegib

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

B	Moh's micrographic surgery

The clinical scenario describes a typical basal cell carcinoma (BCC). All of the above are treatment options for BCCs.

The indication for Moh's surgery are as follows:

- Recurrent or incompletely excised BCC
- Primary BCC with indistinct borders
- Lesions located in or near high-risk areas such as eyelids, nose, ear, nasolabial folds
- Cosmetic and functionally important areas, e.g. head and neck
- Aggressive clinical evolution or histological subtype.

E	Treatment with Vismodegib

Vismodegib is a cyclopamine-competitive antagonist of the smoothened receptor (SMO), which is part of the hedgehog signalling pathway. It is indicated in metastatic BCCs (rare), those that have relapsed after surgery and those not amenable to surgery or radiotherapy treatment.

A	Excision with 5mm margin and flap repair

Although this is an acceptable intervention for BCC, it risks the possibility of a poor cosmetic result.

C	Radiotherapy

Radiotherapy may be undertaken in patients who do not wish, or are too frail, to have surgery.

D	Curette and cautery

Curette and cautery is an option for small nodular or superficial lesions.

38304

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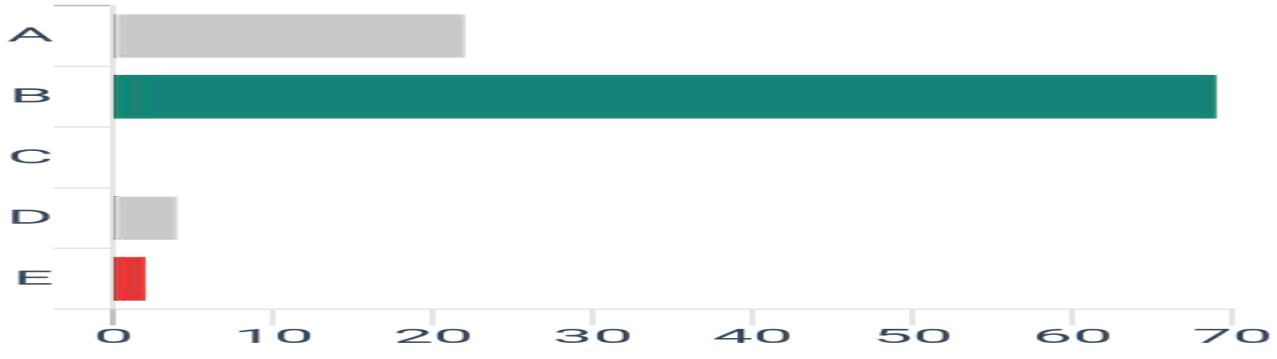

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A 38-year-old man presents to the Dermatology Clinic for review. He has chronic plaque psoriasis and feels that his symptoms are not getting any better despite the use of topical therapies, including vitamin D analogues and oral ciclosporin, and most recently oral methotrexate. He has deforming small joint polyarthritis, also thought to be related to the psoriasis, and is losing significant hand function, affecting his job as an electrician.

Examination confirms widespread psoriatic plaques affecting the extensor surfaces of all four limbs, his chest, back and scalp. There is nail pitting and arthritis, particularly affecting the distal phalanges.

Investigations reveal the following:

Investigations	Results	Normal Values
Haemoglobin (Hb)	123 g/l	135–175 g/l
White cell count (WCC)	8.1×10^9/l	$4.0–11.0 \times 10^9$/l
Platelets (PLT)	198×10^9/l	$150–400 \times 10^9$/l
Sodium (Na^+)	137 mmol/l	135–145 mmol/l
Potassium (K^+)	4.3 mmol/l	3.5–5.0 mmol/l
Creatinine (Cr)	101 µmol/l	50–120 µmol/l
Alanine aminotransferase (ALT)	56 IU/l	5–30 IU/l
Alkaline phosphatase (ALP)	110 IU/l	30–130 IU/l
Bilirubin	12 µmol/l	2–17 µmol/l
Erythrocyte sedimentation rate (ESR)	65 mm/hour	1–10 mm/hour

Which of the following is the most appropriate next intervention?

Your answer was incorrect

A	Abatacept
B	Etanercept
C	Rituximab
D	Tocilizumab

E	Teplizumab

Explanation

B	Etanercept

Etanercept, adalimumab, infliximab and ustekinumab are recommended as a treatment option for adults with plaque psoriasis when both of the following criteria are met:

- The disease is severe, and
- The psoriasis has not responded to standard systemic therapies, including ciclosporin, methotrexate and PUVA, or the person is intolerant of, or has a contraindication to, these treatments.

Etanercept, adalimumab and infliximab act to reduce tumour necrosis factor (TNF) alpha-mediated inflammation, thought to play a major role in the development of psoriasis. Ustekinumab inhibits interleukin (IL)-12 and IL-23, both also thought to play an important role in the pathogenesis of psoriatic disease.

D	Tocilizumab

Tocilizumab is an anti-IL6 monoclonal antibody. Elevated IL-6 has now been found to be closely linked to disease activity in rheumatoid arthritis. It has therefore become an important target in patients with resistant disease. It may also be effective in treating adult-onset Still's disease.

A	Abatacept

Abatacept acts via the CTLA-4 pathway and reduces T cell activity, and therefore, it is not a primary therapy in psoriasis. It is used in patients with rheumatoid arthritis who fail to respond to traditional disease-modifying anti-rheumatic drugs (DMARDs) or TNF alpha inhibitors.

C	Rituximab

Rituximab is an anti-CD20 monoclonal antibody used primarily to downregulate B cell activity and therefore to disrupt B–T lymphocyte interactions. It is used in patients with rheumatoid arthritis who fail to respond to other interventions.

E	Teplizumab

Teplizumab is an anti-CD3 monoclonal antibody, which has been trialled for T cell-mediated autoimmune disorders such as type 1 diabetes.

A 45-year-old man presents to the Dermatology Clinic with a three month history of an exquisitely painful ulcer on his right shin. This started after an insect bite and rapidly developed into an ulcer. He has a background of inflammatory bowel disease (IBD). The other leg was entirely normal.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Venous ulcer
B	Arterial ulcer
C	Neuropathic ulcer
D	Pyoderma gangrenosum
E	Leishmaniasis

Dr. Jamil Alrajhi
Apr 6, 2025

Explanation

D	Pyoderma gangrenosum

The clues are in the history. Pyoderma gangrenosum usually starts suddenly, often at the site of a minor injury (known as the Koebner phenomenon). The skin rapidly breaks down into a very painful, purple, undermined ulcer. It can affect any part of the skin, but the lower legs are a common site. The name pyoderma (infection) gangrenosum (gangrene) is misleading as it is neither an infection nor gangrene. It is associated with a range of underlying systemic illnesses, including IBD (Crohn's/ulcerative colitis), rheumatoid arthritis, myeloid blood dyscrasias and Granulomatosis with polyangiitis.

C	Neuropathic ulcer

Neuropathic ulcers are seen over points of pressure that may not be detected due to abnormal sensation, such as on the soles of the feet.

A	Venous ulcer

Venous ulcers tend to occur as a result of chronic venous stasis, are associated with varicose eczema and are most commonly seen over the medial malleolus.

B	Arterial ulcer

Arterial ulcers are most commonly seen on the lateral surface of the ankle and the toes, rather than the position seen over the shin.

E	Leishmaniasis

There is no history of potential exposure to leishmaniasis, but ulcers are potentially seen on the shins because these are areas accessible to sand flies.

39068

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Difficulty: Easy

A 56-year-old woman presents to her General Practitioner with the following lesion on her shoulder. She thinks that it has been present all of her life.

Her husband has noticed that it has grown in size over the last few months. It is not itchy, nor has it ever bled.

Dr. Jamil Alrajhi

Apr 6, 2025

She has no other medical problems and takes no regular medications.

What is the most likely diagnosis?

Your answer was incorrect

A	Pigmented basal cell carcinoma (BCC)
B	Benign melanocytic naevus
C	Solar lentigo
D	Superficial spreading melanoma
E	Seborrhoeic keratosis

Explanation

D	Superficial spreading melanoma

A malignant melanoma is a tumour of the melanocytes. Two-thirds arise from normal skin, and one-third from pre-existing moles. Superficial spreading malignant melanomas occur as malignant melanocytes migrate laterally along the dermo-epidermal junction, and have a good prognosis. It is important to diagnose and treat melanomas while they are thin, so that removal may result in favourable prognostic outcomes.

C	Solar lentigo

A solar lentigo, also known as liver spot, age spot and senile freckle, is a flat, well-circumscribed patch of darker skin. The size varies from a few millimetres to several centimetres in diameter. Solar lentigines are found on sun-exposed sites, particularly the face or the back of the hands, and tend to be more numerous in fair-skinned individuals.

A	Pigmented basal cell carcinoma (BCC)

Pigmented BCCs are a less common variant of BCCs. They present with the typical features of a BCC (slow-growing, asymptomatic nodule with rolling edges and ulceration in sun-exposed sites) and a darker, rather than pearly, colour.

B	Benign melanocytic naevus

Benign moles typically have a symmetrical appearance with smooth edges, regular borders and < 2 colours. Benign naevi do not usually grow in size after the age of 40, but may instead slowly involute.

E	Seborrhoeic keratosis

Seborrhoeic keratoses are benign, raised lesions that can occur on both sun-exposed and covered body parts. They have a characteristic warty, stuck-on, greasy appearance, with surface crypts and pits.

A 55-year-old man was admitted under the Liver Team with alcoholic liver disease (ALD). He was commenced on primary prophylaxis with ciprofloxacin for spontaneous bacterial peritonitis and discharged from hospital five days later.

A week later, following a short sunbathing spree in the park, he developed well-demarcated erythema a few hours later, shown in the image below. Similar areas are present over the front of his legs with large blisters over his knees and dorsum of his feet.

On examination, there are no other abnormalities on the skin elsewhere.

Which is the most likely diagnosis?

Your answer was incorrect

A	Porphyria cutanea tarda
B	Polymorphic light eruption
C	Pemphigus vulgaris
D	Phototoxic reaction
E	Sunburn reaction

Explanation

D	Phototoxic reaction

The image shows confluent areas on erythema over the face and upper chest with sparing under the chin, in keeping with photosensitivity. Phototoxic drug reactions have been described for all quinolones including ciprofloxacin, an antibiotic choice that can be used for the treatment of spontaneous bacterial peritonitis. Phototoxic skin reactions *per se* are associated with confluent areas of erythema.

Image source: https://commons.wikimedia.org/wiki/File:Dermatomyositis18.jpg (https://commons.wikimedia.org/wiki/File:Dermatomyositis18.jpg)

B	Polymorphic light eruption

Polymorphic light eruptions affect exposed areas and often result in blistering, although the face is often spared. They are usually preceded by a long history of sun intolerance. Polymorphic light eruption appears some hours after sun exposure and a number of features may be seen, including papules and erythematous plaques.

A	Porphyria cutanea tarda

Porphyria cutanea tarda could account for the blisters seen here, however the most common presenting sign of porphyria cutanea tarda is fragility of sun-exposed skin after mechanical trauma, leading to erosions and bullae, typically on hands and forearms and occasionally on the face or feet. Healing of crusted erosions and blisters leaves milia, hyperpigmented patches, and hypopigmented atrophic scars.

C	Pemphigus vulgaris

Pemphigus vulgaris is a painful, blistering rash that isn't confined to sun-exposed areas, particularly affecting the buccal cavity.

E	Sunburn reaction

A short sunbathing spree in an English park would be unlikely to lead to severe sunburn; a phototoxic drug reaction related to quinolone use is much more likely.

A 45-year-old woman attends the Emergency Department (ED) with a four hour history of acute severe central abdominal pain that is colicky in nature and associated with nausea and vomiting.

Other than hypertension, for which she had recently started a beta-blocker and an angiotensin-converting enzyme inhibitor, she is fit and well and has no past medical or surgical history and no family history of note.

Her plain abdominal X-ray is shown below:

What is the most likely diagnosis?

Your answer was incorrect

A	Ogilvie syndrome
B	Angio-oedema of the bowel
C	Gallstone ileus
D	Adhesions
E	Irritable bowel syndrome

Explanation

B	Angio-oedema of the bowel

Angio-oedema is a rare but recognised cause of small bowel obstruction. Hereditary forms of the disease may occur in association with C1 esterase inhibitor deficiency; such cases are likely to present earlier in life, and are usually associated with a family history. The clue in this scenario is the recent use of ACE inhibitors, as these are the drugs most commonly implicated in non-hereditary angio-oedema. Symptoms may occur between a matter of minutes up to many years after starting drug treatment, but usually occur within a few weeks of starting (or taking an increased dose of) the ACE inhibitor. The condition is related to low levels of angiotensin II and a consequent increase in bradykinins. Alternative drugs should be used to minimise the risk of recurrence.

C	Gallstone ileus

Large gallstones may erode from the gallbladder directly into the small bowel, forming a fistulous connection. Subsequent intestinal obstruction may occur as the gallstone impacts. This occurs most often at the ileocaecal valve. Such stones may occasionally be seen on X-rays but often are not, as these tend not to be calcified. As such, CT is usually the means by which the diagnosis is made. In the scenario described, there is neither any history given to suggest gallstone disease, nor any radiological signs that might support this as the diagnosis.

A	Ogilvie syndrome

The abdominal X-ray shown demonstrates small bowel obstruction. This makes Ogilvie syndrome unlikely, as this is a condition of colonic pseudo-obstruction that tends to first present with features of large bowel obstruction.

D	Adhesions

Adhesions are very unlikely to be the cause of obstruction in people without a history of abdominal surgery (although rarely, idiopathic fibrous bands are seen at laparotomy for small bowel obstruction).

E	Irritable bowel syndrome

Irritable bowel syndrome will not cause features of a mechanical obstruction.

A 29-year-old man with a background of non insulin dependent diabetes mellitus (NIDDM) presents to the Emergency Department (ED) with an oozing eruption in his axillae and groins. He describes it as smelly and uncomfortable.

On examination, he had a raised body mass index (BMI) of 35 kg/m^2 and fluctuant nodules, abscesses and sinus tracts.

Which of the following is the most likely diagnosis?

Your answer was incorrect

A	Pyoderma gangrenosum
B	Acanthosis nigricans
C	Erythrasma

D	Hidradenitis suppurativa
E	Necrobiosis lipoidica

Explanation

D	Hidradenitis suppurativa

Hidradenitis suppurativa (HS) is a chronic, debilitating inflammatory disorder. The pathogenesis is uncertain but ‘follicular occlusion’ (follicular plugging with dilatation and rupture of the follicle with secondary inflammation of the apocrine glands) has been implicated in the pathogenesis. HS causes recurrent ‘boils’ in flexural areas. Skin signs can include comedones, subcutaneous nodules, abscesses, scars and sinus tracts. It is associated with insulin resistance, obesity and polycystic ovaries. Other related disorders, of follicular occlusion that may co-exist include acne conglobata, pilonidal abscess and dissecting cellulitis of the scalp.

C	Erythrasma

Erythrasma is a common skin infection by the bacterium *Corynebacterium minutissimum* that commonly affects the skin folds (groin, axilla). It is usually asymptomatic but may also present as a slowly enlarging, slightly scaly pink or brown patch.

A	Pyoderma gangrenosum

Pyoderma gangrenosum is typically painful, consists of a deep, undermined ulcer with a purplish hue, and heals with scarring. Associations include inflammatory bowel disease, rheumatoid arthritis and myeloid blood dyscrasias.

B	Acanthosis nigricans

Acanthosis nigricans is a velvety, brownish hyperpigmentation of the skin, which may be due to obesity, endocrine disease or malignancy.

E	Necrobiosis lipoidica

Necrobiosis lipoidica (NL) is a granulomatous skin disorder that causes yellowish-brown plaques, usually over the shins, and is associated with insulin dependent diabetes. The lesions arise slowly and continue to grow for months/years. The centre of the patch gradually becomes shiny, pale and thin with prominent blood vessels and may ulcerate.

Rate this question:

An 18-year-old woman presents to her General Practitioner (GP) with painful lesions on her face. They have been spreading in size over the last few days. She has been suffering from rhinorrhoea and flu-like symptoms over the last week and has been 'off' her food.

What is the most likely diagnosis?

Your answer was incorrect

A	Erythema infectiosum
B	Impetigo
C	Perioral dermatitis
D	Herpes zoster infection
E	Erysipelas

Explanation

B	Impetigo

Impetigo is a common superficial infection of the epidermis, occurring mainly in children. It is usually due to *Staphylococcus aureus*, a group A beta-haemolytic *Streptococcus* or a mixture of both. It is very contagious. It typically starts as vesicles which then break down to form honey-coloured crusts.

E	Erysipelas

Erysipelas occurs as a generalised area of erythema, rather than the vesicular crusting rash seen here. It is related to group A streptococcal infection.

A	Erythema infectiosum

Erythema infectiosum is associated with an erythematous rash affecting both cheeks, rather than the vesicles and crusting seen here.

C	Perioral dermatitis

Perioral dermatitis is associated with groups of small red papules around the mouth rather than the vesicles and crusting seen here.

D	Herpes zoster infection

Herpes zoster infection occurs with a generalised vesicular rash in chicken pox, or is confined to single dermatomes in shingles.

33386

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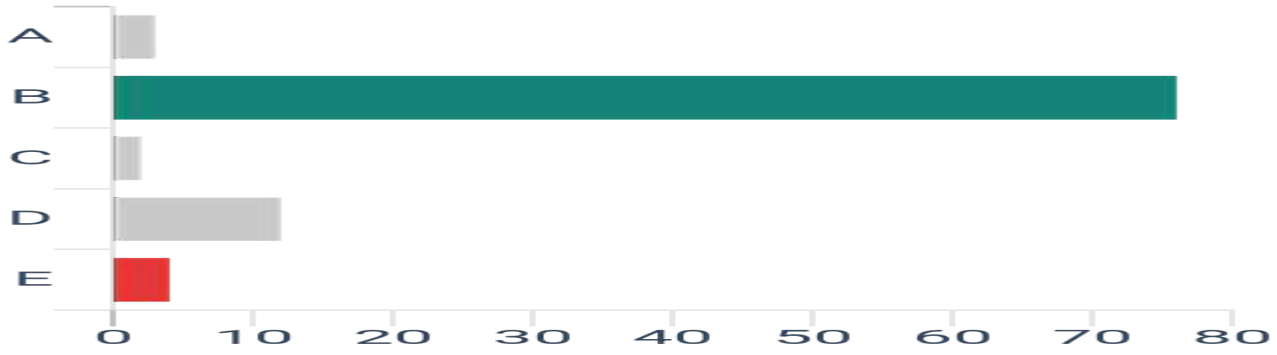

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A 27-year-old man presents to his General Practitioner (GP) complaining of a rash in his groin. He has recently returned from a long trip overseas and has been treated for this rash by a cream given to him by a pharmacist in Bangkok. The patient thought it was an allergic reaction and so had asked for an appropriate cream. However, application of this cream had only made the rash worse. The patient reports that the rash has been quite itchy from the start.

On examination, the rash has a scaly and raised sharp red border and spreads asymmetrically down the inner aspect of the thighs but does not involve the scrotum. The rash is slightly raised and is clearer centrally.

What would be the most appropriate clinical investigation, if any, to perform in order to aid the diagnosis?

Your answer was incorrect

A	Skin prick testing
B	RAST test
C	Bacterial skin swab
D	Direct microscopic examination of KOH-treated skin scrapings
E	Autoimmune profiling

Explanation

D	Direct microscopic examination of KOH-treated skin scrapings

Tinea cruris, also known as ringworm of the groin, is a dermatophyte infection that is more commonly seen in men. It is transmitted via both direct contact between infected individuals and indirect contact with contaminated objects such as towels, bed linens and clothing. The affected area is sharply demarcated and has a scaly raised red border that spreads down the inner thighs from the groin in a symmetrical fashion, but asymmetrical involvement may also occur. The scrotum is usually spared in distinct contrast with infections of this area by Candida. In acute infections, the rash may be moist and exudative and patients may complain of intense pruritus. Microscopic examination of a potassium hydroxide (KOH) treated skin scraping is diagnostic and reveals the typical long branch-like structure of the fungus. This patient was given a steroid cream from the pharmacist that exacerbated the fungal infection.

E	Autoimmune profiling

The presenting symptoms are not suggestive of an autoimmune condition.

A	Skin prick testing

Skin prick testing is performed by piercing the skin with a needle or pin containing a small amount of allergen. It is conventionally used to investigate immediate type hypersensitivity to allergens in patients with rhinoconjunctivitis, contact urticaria, asthma, atopic eczema, and suspected food allergy. It has the advantage of being relatively inexpensive, providing immediate results compared with measurement of serum allergen specific IgE by RAST. In this case, symptoms are typical of dermatophyte infection and therefore initial investigations should reflect that.

B	RAST test

A radioallergosorbent test (RAST) is a blood test used to detect specific IgE antibodies, to determine the substances a patient is allergic to. This is different from patch and skin prick testing that determine allergy by the reaction of a person's skin to different substances.

C	Bacterial skin swab

The symptoms described are not suggestive of a bacterial skin infection. Common bacterial skin infections include: impetigo (golden coloured crusting that may be associated with blistering), erysipelas and cellulitis (sharply and diffuse erythematous lesions respectively that are hot to touch, and can be associated with ulceration).

6795

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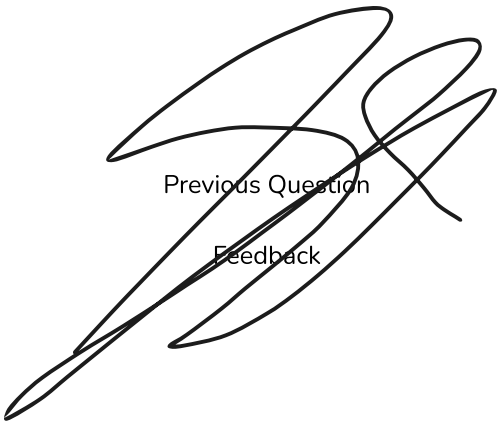

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Previous Question

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Dr. Jamil Alrajhi
Apr 6, 2025

Difficulty: Easy